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MEMOIRS

THE NEW YORK
ACADEMY OF SCIENCES.

ON THE

COLEOPTERA

BY

THOS. L. CASEY

V

1914

PUBLISHED BY
THE NEW ERA PRINTING COMPANY
LANCASTER, PA.

'14. 3896. Dec. 2.

A 1085

CONTENTS

PAGE

I—Studies in Omus and Cicindela..... 1

II—Some Observations on the Carabidæ, including a New Subfamily..... 25

III—A Revision of the Nearctic Harpalinæ..... 45

IV—A Review of the Genus Thyce and of the North American Species of Polyphylla..... 306

V—Miscellaneous Notes and New Species..... 355

I—STUDIES IN OMUS AND CICINDELA.

Having recently received a considerable series of *Omus* and many interesting new forms of *Cicindela*, it seems desirable to draw up a short paper on the subject and the opportunity is taken to give a renewed systematic study of the genus *Omus*, which may aid in forming a more exact and comprehensive idea of the relative degrees of relationship of its many rather confusing species and subspecies.

Omus Esch.

This genus, as known at present, may be divided into three passably well defined subgenera as follows:

Elytra oval; lateral margins of the pronotum acute and without setæ..2
Elytra subcylindric, the lateral thoracic margins not so acute and having erect setæ.....3

2—Elytra with numerous very large foveæ, which are disposed without order among the smaller punctures common to all the species of the genus; median line of the pronotum dilated and foveiform at the middle. [Type and only known species *Omus dejeani* Reiche]. **Megomus**

Elytra with very small and sparse foveæ mingled with the punctures; median stria of the pronotum never so dilated centrally; coloration deep black to slightly brownish, apparently never metallic. [Type *Omus californicus* Esch.] .....**Omus**

3—Elytra punctured and with small sparse foveæ nearly as in *Omus;* colors generally submetallic. [Type and only known species *Omus submetallicus* G. H. Horn].....**Leptomus**

It is not necessary to refer more particularly to *dejeani* and *submetallicus* just now and the present study will be limited to the subgenus *Omus* as defined above.

Subgenus **Omus** Esch.

Observing critically the very numerous taxonomic forms of this subgenus, it becomes easy to recognize seven well defined groups as follows:

Antennæ distinctly shorter in the female than in the male; prothorax relatively narrow, feebly sculptured, deeply declivous at the sides; elytra having a tendency to be broadest behind the middle. Northern coast regions.....Group I

Antennæ about equal in length in the two sexes, except in *fraterculus*..2
2—Pronotum very deeply and conspicuously vermiculately rugose. Coast regions.....Group II
Pronotum feebly and more finely vermiculately rugulose throughout the surface.....3
Pronotum smooth, at least centrally.....6
3—Prothorax somewhat as in *dejeani* in outline, widest near the apex, the sides nearly straight and strongly posteriorly oblique. Sierras. Group III
Prothorax with the sides less oblique and always more or less rounded..4
4—Prothorax relatively small; body very elongate; legs notably long. Sierras.....Group IV
Prothorax as usual, relatively well developed; legs not conspicuously long.....5
5—Body narrower, always notably elongate in form. Coast regions. Group V
Body stouter, generally duller in lustre. Sierras.....Group VI
6—Body stout, more ventricose, generally dull in lustre. Sierras. Group VII

These groups are rather sharply delimited in structure and general habitus; they will be designated below by the principal species in each case.

Group I (*audouini*).

The species are moderately numerous and are confined to the more northern regions, perhaps more especially near the coast, but of this I am not sure in all cases.

Body ventricose, the hind body always very much wider than the prothorax.....2
Body very slender, the elytra more subcylindric and but little wider than the prothorax.....7
2—Elytral punctures strong, irregularly subconfluent, generally without intermingled minute punctures.....3
Elytral punctures feebler, more uniform in distribution and with interspersed minute punctures.....6
3—Elytral punctures toward the suture feebler and finely lineiform at the bottom; body massive, the prothorax larger, rather wider than long, the base rather strongly bisinuate; surface between the more rugulose apical and basal regions almost smooth, opaculate, with very fine anastomosing lines and very minute punctulation; elytra widest slightly behind the middle; antennæ rather stouter basally than in the other species of the group. Length (♂) 16.0 mm.; width 6.0 mm. California (Shasta Co.),—Nunenmacher. **ambiguus** Shpp.
Elytral punctures more rounded, deeper, not lineiform at the bottom at any part of the surface.....4

4—Hind tarsi (♀) shorter, about as long as the tibiæ; prothorax narrow, as long as wide even in the female, the base more transverse and more broadly and feebly bisinuate; surface with the anastomosing lines rather distinct, the minute punctulation evident. Length (♂♀) 14.0–15.5 mm.; width 5.0–5.5 mm. Oregon and Washington State. Rather abundant..... **audouini** Rche.

Hind tarsi (♀) much longer than the tibiæ.....5

5—Body small and notably slender, of a facies and in sculpture nearly as in *audouini* but with shorter and more slender antennæ; prothorax nearly similar, narrow, as long as wide and nearly similar in the two sexes as in *audouini*. Length (♂♀) 12.8–13.2 mm.; width 4.4–4.8 mm. Oregon..... **parvulus** Csy.

Body large, very stout and massive; antennæ notably short in the female; prothorax much larger and broader than in the two preceding, wider than long, the base transverse and barely perceptibly bisinuate, the surface opaculate and with fine anastomosing lines and minute punctulation as in *audouini*; elytra broad, rather feebly convex medially, widest at the middle and with the punctures more evenly circular and much deeper than in any other of the group, perforate, the interspaces rather shining, only feebly alutaceous and without trace of minute punctulation. Length (♀) 17.0 mm.; width 6.3 mm. Northern California (without record of more definite locality).
rugipennis n. sp.

6—Body rather shorter, relatively broader and moderately convex, the hind tarsi much longer than the tibiæ in both sexes; prothorax relatively larger and broader than in *audouini* or *parvulus*, though nearly similarly sculptured; base transverse and very feebly bisinuate; elytra widest at the middle, the punctures rather small and well separated internally and also rather more than usually obsolete near the humeri, which are distinctly convexo-declivous as usual; interspersed minute punctulation very obvious. Length (♂♀) 13.8–15.8 mm.; width 5.3–5.9 mm. California (Del Norte Co.),—Nunenmacher ..... **humeroplanatus** W. Horn

Body larger, more elongate and more convex, relatively not so ventricose as in *audouini*, the prothorax much larger, very little wider than long, opaculate, the fine anastomosing lines evident; base transverse, broadly and very feebly bisinuate; elytra one-half longer than wide, barely one-half wider than the prothorax, widest a little behind the middle; surface very convex, with the micro-granulation strong and more conspicuous than in any other species, almost obliterating the minute punctulation, the punctures rather coarse and confused but unusually shallow and generally with their bottom finely lineiform by transverse light, the scattered foveæ very inconspicuous, much less evident than in the preceding; hind tarsi but little longer than the tibiæ. Length (♂) 16.0 mm.; width 5.9 mm. California (Shasta Retreat, Siskiyou Co.)..... **solidulus** n. sp.

7—Form and habitus radically different from any of the preceding, due to the very elongate cylindric outline; front nearly smooth and without punctures between the foveæ; prothorax about as long as wide, sculptured nearly as in *audouini*, the transverse subbasal groove

rather deep, the sides at its ends feebly constricted; base transverse, very feebly bisinuate; elytra four-fifths longer than wide, scarcely more than a fourth wider than the prothorax, the sides parallel, barely arcuate except basally and apically, finely, sparsely punctate and with rather distinct foveæ. Length (♂) 13.7 mm.; width 4.25 mm. California (Lassen Co.),—Nunenmacher.

cylindricus W. Horn

I am unable to persuade myself that any one of the above forms has less than specific value and would not know how to make the combinations; they are undoubtedly distinct among themselves and by no means so closely allied as in some other groups, where many of the forms obviously have rather less than full specific weight. At first it seemed as though *parvulus* might be no better than a subspecies of *audouini*, but the recent discovery of the female, with its short delicate antennæ and long hind tarsi, apparently determines its specific value.

Alluding to the general question of species in the genus *Omus*, it is quite beyond my power of comprehension to understand how any student, having within him a moderate development of the sense of proportion and having before him such forms as *cylindricus*,* *lævis*, *cribripennis*, *parvicollis* and *edwardsi*, for instance, could, with all their manifold peculiarities of structure and facies, hold them to be of no greater taxonomic weight than mere subordinates of a single species. Such an opinion, I am thoroughly convinced, could only arise from a misconception of the term species from a pragmatic viewpoint.

Group II (*californicus*).

The various units in this group hold much more truly to the typical form than in the preceding and, though recognizable on actual comparison, some of them may be rather difficult to decipher from descriptions, however full of detail. They fall under three rather distinct stem forms as follows:

* The original name given this species was *angusto-cylindricus*. The infliction of such unwieldy names as this and *intermedio-pronotalis* upon our nomenclature may betray a lack of sympathetic respect for our powers of endurance in quoting them, or else, perhaps, they may not be intended to be permanent in their entirety as specific names. I have assumed the latter to be the correct, because the more rational, assumption, and have therefore omitted the unnecessary qualifying part of these hyphenated specific names.

Body rather stout, strongly convex, the sides of the prothorax converging and but slightly arcuate from near the apex to the base.....2

Body much narrower, the elytral punctures denser; prothorax with the sides subparallel and broadly arcuate in more than apical half, then rapidly more convergent to the base; copulatory spicule in *mimus* nearly as in *californicus*, concealed in the type of *sculptilis*.....3

2—Form only moderately elongate, ventricose, shining; head narrower than the prothorax in both sexes, rugose throughout, the median part of the front without punctures; prothorax obtrapezoidal, about as long as wide, a little wider in some females, very deeply vermiculato-rugose throughout; elytra oval, barely more than one-half longer than wide, widest at the middle, the coarse strong punctures well separated suturally, close and subconfluent laterally; copulatory spicule obliquely and almost rectilinearly truncate externally at tip, the latter only moderately prolonged. Length (♂♀) 14.0–16.8 mm.; width 5.0–5.9 mm. California (about San Francisco Bay). Abundant.....**californicus** Esch.

A—Similar to *californicus* but rather larger and more elongate, the elytra three-fourths or more longer than wide; prothorax always wider than long by a fourth to third of its length in the female, in which sex it is more than three-fourths as wide as the elytra; copulatory spicule not exposed in the single male. Length (♂♀) 15.5–17.5 mm.; width 5.4–6.0 mm. California (locality not recorded but probably near San Francisco). Three examples.

vermiculatus n. subsp.

Form still more abbreviated, ventricose, much smaller in size, rather shining; head barely narrower than the prothorax, rugose throughout; prothorax as in *californicus* but with the vermiculiform rugosity coarser and rather less deep, becoming in fact rather feeble very near the median stria; elytra very evenly oval and widest at the middle, with strongly arcuate sides, the punctures coarse, deep and rather close-set, more evenly spaced throughout than in *californicus;* copulatory spicule very different, narrower and more prolonged apically and evenly arcuate in curvature, not at all truncate externally. Length (♂) 13.0 mm.; width 5.0 mm. Oregon (Josephine Co.),—Nunenmacher. .....**oregonensis** Csy.

3—Body rather narrow and elongate, moderately convex, moderately shining, more densely sculptured than *californicus;* head narrower than the prothorax, very closely and strongly rugose throughout; prothorax wider than long, the vermiform rugæ very deep and finer than usual in *californicus;* elytra oblong-oval, two-thirds longer than wide, the sides only moderately arcuate, widest near the middle, coarsely, deeply and very uniformly, closely and almost subconfluently punctured throughout, each puncture having a more distinct granule at its anterior end than in *californicus* and rather less coarse and more elongate in form. Length (♂) 15.5 mm.; width 5.4 mm. California (north of San Francisco). A single example.

sculptilis Csy.

A—Smaller and still narrower than *sculptilis* but otherwise very similar, except that the head is about as wide as the prothorax, the rugæ

of the latter not so fine and the elytra more evenly elongate-oval and less oblong; they are also more convex and have the punctures more clearly separated and without such evident acute granules, being more as in *californicus*. Length (♂) 14.0–14.3 mm.; width 4.8–5.1 mm. California (the type bears no more accurate indication of locality, but another example at hand was collected near San Francisco) ..... **mimus** Csy.

Additional material serves to show that *sculptilis* should be given higher relative value than previously accorded it, the narrow form of body and peculiar outline of the prothorax, still more accentuated in *mimus*, serving to isolate it from *californicus* at a glance; *mimus* is evidently closely related but is much more slender in its anterior parts. The types of *vermiculatus* were received under the name *lecontei*.

Group III (*edwardsi*).

The large stout forms, with very oblique and nearly straight sides of the prothorax, constituting this group, are well known to all collectors. They are apparently very circumscribed in habitat, being confined to that part of the Sierras in and near Placer Co. The elytra are frequently slightly brownish in tint, apparently not always wholly because of immaturity. Having been fortunate enough to personally capture a single example of the true *edwardsi* on the shore of Lake Tahoe, I feel better prepared to separate the various units in a more definite manner, for in most collections a number of distinct modifications of the stem form figure under the name *edwardsi*, which in its typical development inhabits only the region near Lake Tahoe. There are two distinct types in the group as follows:

Elytral sculpture coarser and denser, the punctures rather close-set suturally, becoming densely crowded on the flanks 2

Elytral sculpture much finer, the punctures everywhere notably small, widely separated suturally and never densely crowded on the flanks.. 3

2—Form oblong-elongate, only moderately shining, black; head finely and rather feebly rugulose, the front between the impressions nearly smooth but without punctures; prothorax relatively smaller than usual and less transverse, somewhat as in *edwardsi*, only a third to two-fifths wider than long, finely and closely vermiculato-rugulose throughout; elytra two-thirds to three-fourths longer than wide, more oblong than usual, the sides less arcuate, widest at the middle and less than one-half wider than the prothorax. Length (♂♀) 17.5–18.0 mm.; width 6.0–6.6 mm. California (Placer Co.).
montanus Csy.

A—Form nearly as in *montanus* but rather more slender and frequently brownish in color, the sculpture similar throughout; prothorax shorter and more transverse, relatively more narrowed at base; hind tarsi shorter and more slender. Length (♀) 16.8–17.8 mm.; width 5.8–6.0 mm. California (Placer Co.). One specimen received at the same time as the preceding and another from a different source. . . . . **brunnescens** Csy.

3—Form stouter, the hind body shorter, more dilated and with more arcuate sides than in *montanus*, very faintly brunnescent; head similar but with still feebler rugulosity; prothorax only a fourth wider than long, finely rugulose and with some extremely minute punctulation, the anterior transverse impression conspicuous; elytra scarcely more than one-half longer than wide, very evenly oval, with evenly arcuate sides, widest at the middle; punctures fine and well separated even on the flanks. Length (♂) 17.0 mm.; width 6.2 mm. California (Lake Tahoe). . . . . **edwardsi** Cr.

A—Larger than *edwardsi* but otherwise very similar, except that the prothorax is slightly more transverse and the fine rugulosity of the pronotum distinctly stronger, with more shining interspaces; labrum with the median lobe strong, more abruptly truncate at the tip of the lobe than in *edwardsi;* elytra more elongate though evenly oval, with arcuate sides, the punctures rather small and well separated but stronger than in *edwardsi*, the scattered foveæ much more distinct than in that species, where they are unusually feeble and indistinct. Length (♂♀) 15.8–18.5 mm.; width 5.5–6 7 mm. California (Placer Co.). [*O. lucidicollis* Csy.].

lobatus Csy.

In the above described topotype of *edwardsi*, the seta at each side of the epistoma is at the middle of the length and there are four long stiff setæ above each eye, a condition which is however unstable in the genus. *Lucidicollis* cannot be maintained even as a well defined variety and must be united with *lobatus*.

Group IV (*parvicollis*).

The general habitus in this group, due to the very elongate form, small prothorax and fine sparse elytral punctures, is altogether different from that of any other type of the genus; the various units seem to be confined to the southern Sierras, in and near Tulare Co. Those known thus far are the following:

Body very slender, elongate, convex, deep black and subopaculate; head subequal in width to the prothorax, moderately though distinctly rugose, the median part of the front smooth and not punctate; apical part of the mandibles very long and slender; prothorax as long as wide (♂) to slightly wider than long (♀), barely more than half as wide as the elytra, the sides converging from near the apex

to the base and feebly arcuate; base feebly lobed medially; surface opaque, with very fine anastomosing irregular lines and fine anterior transverse impression, between which and the apex the surface is longitudinally rugulose; elytra evenly oval and widest at the middle, nearly twice as long as wide, finely sparsely and evenly punctate, the punctures well separated and not larger on the flanks, the scattered foveæ small and generally rather feeble. Length (♂ ♀) 16.5–19.0 mm.; width 5.4–6.7 mm. California (at various points in Tulare Co.). Rather abundant..... **parvicollis** Csy.

A—Similar to the preceding but larger, with the head (♂) distinctly narrower than the prothorax, the mandibles rather less prolonged apically, the anterior impressions feebler, the front feebly rugulose and the antennæ longer; prothorax relatively not quite so small and wider than long, the sides anteriorly more inflated, similarly sculptured and similar at base but much more than half as wide as the elytra, the latter nearly similar but with the sparse punctures a little larger and the scattered foveæ more distinct, not so evenly oval and widest slightly behind the middle. Length (♂) 19.0 mm.; width 6.7 mm. California (Tulare Co.)..... **spissipes** Csy.

B—Similar to *parvicollis* but larger and still more elongate, the head not quite as wide as the prothorax, the front similarly nearly smooth and with moderate impressions; prothorax relatively larger and wider than long, more inflated anteriorly, the base not so lobed in the middle, very feebly and transversely bisinuate, the sculpture of the same nature but stronger; elytra still more elongate, evenly oval, widest at the middle and with the punctures well separated but much larger and stronger than in either of the preceding, the surface less even and the foveæ distinct. Length (♂ ♀) 18.5–20.0 mm.; width 6.0–7.0 mm. California (Tulare Co.). **procerus** Csy.

The copulatory spicule throughout is of the same type, long, slender and strongly bent downward apically. *Procerus* is I think more nearly a distinct species than a subspecies.

Group V (*lecontei*).

In this group the body is decidedly elongate, rather strongly sculptured and usually with shining integuments; it occurs in the coast regions from Monterey to northern Oregon, so far as now represented in my collection, and consists of four species and several subspecies as follows:

Elytra widest before the middle, gradually arcuately narrowed thence to the acute apex; labrum subtruncate; body slender; lateral margin of the prothorax fine and but slightly reflexed, attaining the base; head and pronotum rugulose throughout. Length 15–16 mm. California (southern coast ranges from Monterey to Sta. Barbara and Fort Tejon)..... **lecontei** G. H. Horn

Elytra evenly elongate-oval, widest at the middle; labrum arcuately produced and frequently narrowly truncate at apex; habitat less southern. 2

2—Sides of the prothorax strongly rounded, becoming subparallel in nearly apical half. Body slender (♂), less slender (♀), rather convex, shining; head narrower than the prothorax, coarsely wrinkled, the front medially smoother, not punctate; prothorax coarsely but not very strongly, vermicularly rugulose, the base transverse, not evidently bisinuate; anterior transverse impression fine but distinct; side margins sharply reflexed, strongly near the base, which they virtually attain; elytra fully three-fourths longer than wide, with evenly arcuate sides and small, widely separated punctures, becoming closer but scarcely at all larger on the flanks. Length (♂ ♀) 17.0 mm.; width 5.8–6.0 mm. California (near San Francisco),—Dunn. **elongatus** Csy.

Sides of the prothorax oblique and feebly arcuate from near the apex to the base. 3

3—Front generally not at all punctulate though smooth or but feebly rugulose; southern coast regions. Body elongate, strongly convex, shining; head distinctly narrower than the prothorax, the front feebly rugulose and with traces of very minute sparse punctulation; prothorax slightly wider than long, widest near apical fourth, where the sides are inflated and rounded; side margins as in the preceding, the surface more strongly vermiculato-rugose, as in *californicus* though much more feebly; elytra two-thirds longer than wide, unusually convex, the punctures small, everywhere widely separated. Length (♂) 16.0 mm.; width 5.5 mm. California (near San Francisco),—Dunn. . . . . **dunni** Csy.

A—Narrower and still more elongate, the median part of the front very smooth and sculptureless; labrum with the median lobe much produced, abruptly truncate at tip; rugulosity strong; prothorax with the sides converging and evenly, moderately arcuate from apex to base, the margin still more strongly reflexed, especially apically and basally; surface similar; base broadly arcuate medially; elytra narrower and longer, the punctures stronger, closer laterally, each similarly with a small acute anterior granule, the foveæ small and not conspicuous. Length (♂ ♀) 16.5–18.0 mm.; width 5.5–6.2 mm. California (Carmel, Monterey Co.). . . . . **regularis** Csy.

B—Smaller and still narrower, notably slender and not so convex, less shining; head similar, the truncate lobe of the labrum not quite so prominent; prothorax throughout nearly as in *regularis*, barely at all wider than long; elytra almost twice as long as wide, very evenly oblong-oval, the punctures similarly small, well separated, aciculate and strongly granuliferous, the interspaces dull and more strongly micro-reticulate than in either of the preceding. Length (♂) 15.5 mm.; width 5.2 mm. California (Monterey Co.), —Fuchs. . . . . **maritimus** Csy.

Front generally finely, sparsely punctulate, the punctures gradually obsolescent in some forms, northern coast regions. Body moderately

elongate, convex, more shining than in the preceding section; head distinctly narrower than the prothorax, rugulose, the oblique impressions deep, the intermediate surface broadly smooth and with fine scattered punctures; prothorax well developed, slightly wider than long, the sides converging and very evenly, moderately arcuate from apex to base, the latter broadly lobed medially; side margins acute but much more finely and feebly reflexed than in the preceding section; surface with anastomosing fine sculpture, stronger laterally, feeble on the broadly flattened median part, which is more rapidly declivous at the sides to the transverse impression; elytra barely more than one-half longer than wide, the sides evenly arcuate, rather rapidly pointed at apex; surface somewhat uneven, with strong, rather close-set punctures and distinct foveæ. Length (♀) 15.5 mm.; width 5.4 mm. Oregon..... **borealis** Csy.

A—Similar but somewhat larger and a little more elongate, the punctures of the very smooth polished medio-frontal surface fine and barely evident; prothorax perfectly similar throughout, except that the rugulosity is slightly finer and feebler and the median flattened part is better defined posteriorly by the rather more abrupt slopes; median stria sometimes slightly deeper centrally—a reversion toward *Megomus*; elytra similar and widest at the middle, with evenly rounded sides but more elongate and not quite so convex, two-thirds longer than wide; punctures small and widely separated medially, stronger and closer laterally. Length (♂) 17.0 mm.; width 6.0 mm. California (Plumas Co.), —Nunenmacher..... **pronotalis** W. Horn

B—Similar to *pronotalis* but a little narrower, more convex and still more shining, the front similar, the punctulation almost completely obsolete though traceable; prothorax throughout as in *borealis* but rather strongly and more evenly, vermicularly rugulose throughout, the postero-median flattened part less well defined than in *pronotalis* but better defined than in *borealis;* base transverse, barely at all lobed medially; elytra nearly three-fourths longer than wide, very evenly oval, with evenly arcuate sides, the surface convex, the punctures fine and sparse suturally, a little less fine and less sparse laterally, the foveæ small but distinct. Length (♂) 16.5 mm.; width 5.5 mm. California (Lassen Co.), —Nunenmacher..... **nunenmacheri** W. Horn

The copulatory spicule, so far as exposed in examples of this group at hand, is very slender and strongly bent arcuately downward at tip, very much as in the preceding group, but I have not been able to note its conformation in the singular *borealis* section, which is of more northern distribution and quite distinct in several directions besides the postero-medial flattening of the pronotal surface, which is barely traceable in *borealis*, feeble in *nunenmacheri* and somewhat pronounced in *pronotalis*.

Group VI (*sequoiarum*).

In some of the species of this group there is a decided sexual inequality in the antennæ, similar to that so markedly developed in the *audouini* group. The various species and subspecies seem to be confined to the Sierras, from Sierra to Mariposa Co.; they are generally of rather stout build and with opaculate or feebly shining integuments, but are less ventricose than in the *lævis* group. So far as known to me they may be differentiated as follows:

Body decidedly elongate and of larger size, strongly convex. Head narrower than the prothorax, rugulose throughout, the impressions feeble, the front between them less coarsely but distinctly rugulose and without punctures; labrum moderately and arcuately lobed; prothorax about as long as wide (♂) or wider than long (♀), obtrapezoidal, widest near the apex, with the oblique sides but very feebly arcuate and coarsely and strongly reflexed, the margin attaining the base, which is transverse, very feebly bisinuate; surface finely and very moderately vermicularly rugose, equally throughout; elytra very evenly elongate-oval and strongly convex, three-fourths longer than wide, widest exactly at the middle, the punctures small, not deep, aciculate and widely separated, but little larger and still well separated on the flanks, the foveæ small and very inconspicuous. Length (♂♀) 16.5–20.0 mm.; width 5.8–7.0 mm. California (Mokelumne Hill, Calaveras Co.),—Blaisdell..... **blaisdelli** Csy.

A—Nearly similar but still larger, the head nearly similar throughout; prothorax larger, wider than long in both sexes, the sides similarly coarsely reflexed but more arcuate, the rugulosity rather coarser; elytra similar in their regularly elongate-oval form but with the punctures very coarse and deep, separated by about their own diameters and, on the flanks, not coarser, as is usual, but smaller and more close-set though not in mutual contact; hind tarsi notably long. Length (♂♀) 17.5–21.0 mm.; width 6.0–7.2 mm. California (Placerville, Eldorado Co.)..... **cribripennis** Csy.

Body apparently rather elongate. Deep black, shining; head moderate, wrinkled all over, except the middle of the front, which is smooth and sparsely punctate, the impressions feeble; labrum moderately, arcuately lobed; prothorax wrinkled throughout but not deeply, the lateral margin fine and but slightly reflexed, attaining the base; sides feebly arcuate, moderately converging to the base; elytra elliptical, widest in front of the middle, moderately convex, closely, not deeply punctate, confusedly so toward apex. Length 17 mm. California (Coulterville, Mariposa Co.)..... **intermedius** Leng

Body notably stout in form; sides of the prothorax finely but rather strongly reflexed, much more finely so than in *blaisdelli* and *cribripennis*; median part of the front nearly smooth and with scattered small but distinct punctures as in *intermedius*.....2

2—Body larger and very stout, rather dull in lustre as a rule; head much smaller than the prothorax, rugulose throughout but more obsoletely

at the middle of the front, the impressions feeble; prothorax unusually short, fully a third wider than long, widest near apical fourth, the sides only very moderately oblique and rather feebly arcuate thence posteriorly to the base (♂), or nearly to the base, where they become strongly oblique (♀), the acute margin attaining the base, which is transverse, broadly, feebly bisinuate; surface distinctly and evenly vermicularly rugulose throughout; elytra (♂) evenly and obtusely oval, widest at the middle, or (♀) more acutely and obliquely tapering apically and sometimes widest a little before the middle, the punctures rather strong and deep, well separated, coarser and dense laterally. Length (♂♀) 15.5–17.5 mm.; width 6.1–6.5 mm. California (Big Trees, Calaveras Co.). **sequoiarum** Cr.

A—Similar but a little larger and rather more elongate, the prothorax similar throughout, except that it is less abbreviated, being about a fourth wider than long; elytra (♂) not evenly and obtusely oval but widest well before the middle, thence arcuately tapering to the acute apex, the punctures similarly strong and deep and everywhere closer; labrum similarly with a pronounced narrowly truncate median lobe. Length (♂) 17.5 mm.; width 6.3 mm. California,—Levette..... **lugubris** Csy.

B—Similar to *lugubris* throughout but with still somewhat less transverse prothorax, in which the acute side margin does not attain the base as in the two preceding, but abruptly terminates at a considerable distance from the base; elytra (♂) evenly and very obtusely oval, widest at the middle, the punctures not so coarse, more nearly as in *sequoiarum* but more close-set, subcontiguous, the foveæ very few, small, widely dispersed and inconspicuous. Length (♂) 17.0 mm.; width 6.4 mm. California,—Levette. **sierricola** Csy.

C—Similar to *sequoiarum* but more parallel, less ventricose and less convex; head relatively a little larger; prothorax nearly a third wider than long, as in *sequoiarum* throughout but with the sides evenly converging and subevenly and distinctly arcuate from apex to base, very little more converging near the base, the acute margins attaining the base; elytra more oblong-oval and more elongate, slightly more than one-half longer than wide, more gradually pointed at apex though similarly widest at the middle, the punctures much finer and feebler than in any of the three preceding, substellate and sparse, but little larger or closer laterally; hind tarsi much longer, being nearly one-half longer than the tibiæ. Length (♂) 16.0 mm.; width 6.0 mm. (Big Trees, Calaveras Co.)..... **longitarsis** n. subsp.

Body much smaller, less stout and not so convex.....3

3—Male and female differing greatly, the former more slender, the latter very stout, with much larger and more transverse prothorax and decidedly shorter antennæ. Surface rather shining; head much narrower than the prothorax, the labrum rather strongly lobed; prothorax (♂) barely a fifth wider than long, the sides converging, distinctly and subevenly arcuate from apex to base, the acute margins strongly reflexed and attaining the base; surface rather

deeply but finely vermicularly rugulose throughout, or (♀) fully a third wider than long but otherwise similar, except that the rugulosity is a little coarser and stronger, almost as in some modifications of the *californicus* type; elytra oval, widest near the middle, more acutely tapering apically in the female. Length (♂♀) 13.5–15.0 mm.; width 5.2–5.9 mm. California (Forest Hill, Placer Co.).

fraterculus Csy.

Male and female nearly similar and but very moderately stout, generally less shining; elytral punctures very coarse and deep, the interspaces rather shining; head nearly as in the preceding; prothorax (♀) a fifth wider than long, differing greatly in shape from *fraterculus*, being widest at apical third, the sides thence oblique and more nearly straight to the base, the side margins and sculpture nearly similar; elytra subevenly oval, gradually acutely narrowed apically, widest at the middle, the strong punctures distinctly separated, the interspaces with scattered small punctures; at the sides the coarse punctures are very dense and everywhere somewhat aciculate. Length (♀) 14.5 mm.; width 5.25 mm. California,—Levette.

punctifrons Csy.

A—Similar, but the labrum has only four instead of six setigerous punctures in the type; prothorax (♂) nearly as in the female type of the preceding in every way and with the base similarly transverse and feebly bisinuate; elytra rather broader than in the preceding female type, less gradually acute posteriorly, the punctures still coarser and more conspicuous, in mutual contact and very coarse on the flanks; foveæ rather large but very few in number, feeble and inconspicuous. Length (♂) 14.0 mm.; width 5.28 mm. California (Sierra Co.),—Fuchs. . . . . **degener** Csy.

B—Similar in general form, the female a little stouter than the type of *degener;* head similar; prothorax a little broader, a fourth wider than long, as in *degener*, except that the sides from anterior third to the apex are straighter; elytra barely one-half longer than wide, oval, gradually acute at apex, only feebly convex, the side margins strongly reflexed basally as in *degener* and much more elevated than in *punctifrons;* sculpture differing greatly from any of the three preceding, the punctures being less coarse, still more irregular in form and densely coalescent throughout, the interspaces duller, with much stronger micro-reticulation and with scattered small punctures. Length (♀) 14.0 mm.; width 5.4 mm. California,—Levette. . . . . **confluens** Csy.

I am rather of the opinion that *cribripennis* is a species different from *blaisdelli* and that *confluens* has higher value than here suggested for it, but feel that the modern tendency to combine rather than to differentiate and to attribute structural differences in related forms to accidental causes, should be respected at least to some extent. In the females of this group the coarse setigerous punctures forming a series bordering the acute apex of the last

abdominal segment, are rather better developed than elsewhere. The copulatory spicule in the few instances where it is observable without dissection, has a form in this group very different from that seen in the preceding groups, the apex being less slender and but very feebly curved downward.

Group VII (*lævis*).

No other group comprises within its limits such marked diversity of elytral sculpture as this, for while the prothorax remains constant throughout in its very smooth opaque surface, with scarcely a trace of sculpture except the feeble rugulosity about its periphery, the elytra may be more coarsely and conspicuously punctured than in any other species of the genus as in *compositus*, or perfectly smooth, with barely a trace of any sort of punctuation as in *lævis*, this latter condition also being a unique exception in the genus. The body is rather short and notably stout in form and is unusually ventricose. The copulatory spicule is somewhat as in the *californicus* group, being subangularly bent apically, the distal part straight, but it is more prolonged than in *californicus*. There seem to be three species and several subspecies as follows:

Elytral punctures strong, each with an acute anterior granule. Body (♀) stout, convex, dull and sericeo-alutaceous in lustre; head smaller than the prothorax, moderately rugulose almost throughout, the front not punctate; impressions feeble; labrum strongly lobed; prothorax large, much wider than long, widest near the apex, the sides only moderately oblique and feebly arcuate, inwardly arcuate at base, the reflexed margin moderate, stronger posteriorly, not attaining the base; surface opaque, finely but distinctly, confusedly rugulose basally and apically and feebly, transversely plicatulate laterally; elytra less than one-half longer than wide, evenly oval, pointed apically, widest at the middle, much wider than the prothorax, the punctures rather coarse, moderately deep, impressed and in mutual contact throughout, the intervals opaculate; foveæ indistinct. Male much narrower than the female, with more oblong elytra, the punctures nearly similar but distinctly separated suturally, the interspaces similarly opaculate; prothorax as in *sequoiarum*, much narrower and more narrowed basally than in the female, the side margin attaining the base in the single example at hand. Length (♂ ♀) 15.5 mm.; width 5.8–6.3 mm. California (Wawona, Mariposa Co.). [*O. collaris* Csy.]. Description drawn from the type of *collaris*. . . . . **horni** Lec.

A—Male only moderately stout, convex, dull throughout; head similar but less rugulose, the front very smooth, punctureless; supra-

orbital setæ only three in number in the type; antennæ more slender; prothorax a fourth wider than long, widest anteriorly, the sides converging rather strongly and moderately arcuate thence posteriorly, abruptly straight and more oblique for a considerable distance before the base, the margin fine throughout, attaining the base; surface opaque, more feebly rugulose basally, finely, longitudinally creased apically and feebly, transversely so laterally, the stria very fine; elytra one-half longer than wide, oval, obtuse, widest at the middle, the punctures as in the preceding but smaller, more feebly impressed, almost in mutual contact, the intervals sericeous. Length (♂) 16.0 mm.; width 6.0 mm. California (Giant Forest, Tulare Co.),—Dietz..... **temperatus** n. subsp.

B—Male stout, convex, more ventricose than in any of the preceding, opaque, the elytra rather strongly shining; head moderately rugulose; supra-orbital setæ three or four in number; prothorax as in *temperatus*, the sides as strongly oblique as in *sequoiarum*, feebly arcuate, the margins abruptly rounded at the immediate base, which they attain; surface more confusedly rugulose apically than in *temperatus*, more nearly as in *horni*; elytra short, broadly oval, widest at the middle, with very coarse deep punctures, which are separated by nearly their own diameters suturally, dense laterally, the interspaces notably shining. Length (♂) 14.8–16.0 mm.; width 6.0–6.2 mm. California (Wawona, Mariposa Co.)..... **compositus** Csy.

Elytral punctures, when present, perfectly simple and without trace of an acute anterior granule..... 2

2—Elytra distinctly punctured; side margins of the prothorax attaining the base. Body stout, convex, ventricose; head very feebly rugulose, with slight impressions, the front with very fine sparse punctulation; supra-orbital setæ four in number; prothorax (♂) nearly as long as wide, opaque, with very fine or obsolescent anastomosing lines, though virtually smooth, the basal and apical rugulosity very feeble; outline as in *sequoiarum*, or (♀) larger, more transverse, with slightly less converging sides; elytra evenly oval, rather pointed at apex, widest at the middle, much broader in the female, the punctures rather coarse and dense throughout though not very deep. Length (♂♀) 15.8–18.0 mm.; width 6.0–7.0 mm. California (Tulare Co., 6400 feet). Abundant and not more than usually variable..... **tularensis** Csy.

A—Similar to *tularensis* in every way, except that the body is not quite so large and notably more slender in both sexes; head opaque, with the rugulosity almost completely obsolete, the fine frontal punctulation also indistinct; prothorax differing less sexually, the sides strongly oblique and feebly arcuate in both sexes, the surface nearly as in *tularensis* throughout but with the sculpture still more obsolete; base perfectly straight and transverse in the male type, or feebly bisinuate in a female recently received; elytra narrower and more elongate than in *tularensis* though otherwise similar. Length (♂♀) 15.0–16.8 mm.; width 5.5–6.2 mm. California (Davenport, Tulare Co., 6500 feet)..... **gracilior** Csy.

B—Similar in general characters but much narrower, more elongate, less ventricose and less convex than in *tularensis*, opaculate throughout; head smooth, with the feeblest traces of sculpture; prothorax nearly as long as wide, the sides evenly converging and very evenly, moderately arcuate from apex to base, the latter transverse and very feebly bisinuate; side margins very finely reflexed and attaining the base; surface almost perfectly smooth throughout, the anterior transverse impression feeble, the basal rugulosity fine and shallow; elytra one-half longer than wide and only a third wider than the prothorax, the punctures much smaller and feebler than in either of the preceding, becoming obsolete basally and stronger and close laterally and apically, the small scattered foveæ very distinct. Length (♂) 16.5 mm.; width 5.8 mm. California (Tulare Co.),—Dietz..... **opacellus** n. subsp.

Elytra wholly impunctate, the side margins of the prothorax very finely reflexed and not attaining the base. Body stout, ventricose, convex; head nearly smooth, the lobe of the labrum very strong, narrowly truncate at tip; prothorax (♀) a third wider than long, widest near the apex, the sides thence rather strongly oblique and feebly arcuate to the base, which is transverse and very feebly bisinuate; surface nearly smooth, rugulose postero-laterally and at base, the anterior transverse impression deep; elytra rather broad, oval, widest at the middle, arcuately and acutely ogival apically in almost posterior half; surface smooth, opaculate, with strong micro-reticulation and fine subobsolete anastomosing creases, also with feeble traces of very fine punctures apically; foveæ very small, scarcely larger than the asperate punctures bearing the setæ. Length (♀) 19.0 mm.; width 6.8 mm. California (Mineral King Road, Tulare Co., 8000 feet),—Fuchs..... **lævis** G. H. Horn

This group presents a rather more difficult taxonomic study than any other and I have puzzled long over the most probable inter-relationships of the various units. *Horni* is certainly a distinct species, but whether the forms from *tularensis* to *lævis* constitute a single species or not, I cannot quite make up my mind. *Opacellus* is a very distinct form, but there is no record at hand concerning the altitude of its habitat.

In the above arrangement I have been obliged to omit *xanti* Lec. and *vandykei* and *fuchsi* of W. Horn, not having seen any authentic representatives of them. The descriptions of *lecontei* and *intermedius* are taken from the originals and with reference also to the work of Mr. Leng. In the case of *horni*, its identity with *collaris* is merely a surmise; the available material in this restricted section is at present far too small for final judgment.

Cincindela Linn.

In the *longilabris* group, the species allied to *montana*, having the upper surface black, are better defined than those allied to *longilabris*, for they differ among themselves not only quite radically in sculpture but in tarsal characters. The strong dilatation of the first three joints of the anterior male tarsi in this group has been noted many times; this, as well as the elongate labrum, peculiar coarse sculpture and bald front in both sexes, causes it to be sharply defined among the other groups. The black species may be known by the following characters:

Elytral punctures coarse and close, everywhere either in mutual contact or densely and polygonally crowded.....2

Elytral punctures suturally smaller, rounded and clearly separated by the more shining interspaces, larger and denser laterally; under surface not or barely noticeably metallic at any part; tarsi very slender..4

2—Hind tarsi long and very slender, much longer than the tibiæ in both sexes; upper surface deep black, dull in lustre, the labrum (♂) entirely pale, or (♀) black, generally pallescent narrowly along the middle and at the basal margin; prothorax transverse, obtrapezoidal, dull, with deep transverse impressions; elytra with a fine faint and feebly bent median band and a slightly pallescent transverse apical streak; abdomen with slight metallic coloration. Length (♂♀) 13.5–15.0 mm.; width 5.0–5.7 mm. Utah (Provo),—Spalding. **montana** Lec.

Hind tarsi notably short, not longer than the tibiæ in either sex.....3

3—Tarsi throughout very slender and filiform; body smaller and more abbreviated than in *montana*; labrum (♂) pale throughout, twice as wide as long, the two apical sinuses broad and very feeble, the lateral teeth short and very obtuse, the medial small, acutely angular, or (♀) pale, nubilously black toward the margins but not basally, much less than twice as wide as long, more produced medially, the lateral teeth strong, rather bluntly angular, the medial tooth strong and very acute; prothorax very short and transverse; elytra shorter, the fine and moderately pale median band more strongly angulate than in *montana*, the apical streak obsolete; abdomen very faintly metallic. Length (♂♀) 11.5–12.8 mm.; width 4.5–5.0 mm. Alberta (Calgary),—Criddle.....**canadensis** Csy.

Tarsi very stout, much thicker than in any other species of the genus within our faunal limits; body small, short, the head and prothorax peculiarly reduced, deep black, the elytra greenish-black; labrum (♀) deep black throughout, twice as wide as long, tridentate; prothorax short and very transverse; elytra with the very fine middle band formed as in the preceding but obsolete in the type, excepting a pale point representing its posterior end, the apical streak obsolete; abdomen rather brilliantly metallic green and violet intermingled. Length (♀) 11.5mm.; width 4.5 mm. Manitoba (Aweme),—Criddle. **spissitarsis** Csy.

4—Body moderately stout, rather convex, opaque, the elytra shining, deep black, the abdomen with trace of metallic lustre; labrum (♀) deep black throughout, shining, carinate medially and with only a few coarse rugulæ, not strongly bi-impressed, tridentate on the produced tip; prothorax transverse, equal in width to the head; elytra without pale maculation of any kind; abdomen (♀) with the apex produced medially, the lobe arcuately truncate, its surface impressed; hind tarsi evidently longer than the tibiæ but much shorter than in *montana*. Length (♀) 13.0 mm.; width 4.8 mm. Nebraska. **nebraskana** Csy.

Body larger and distinctly stouter, opaque, the elytra shining, deep black; labrum (♀) deep black, produced and tridentate at tip, the surface dull, distinctly biconcave and finely, closely rugulose, strongly carinate medially; prothorax as usual, strongly transverse; elytra without pale maculation, though with the location of the median band rather obviously indicated by the form of sculpture; abdomen with feeble metallic glint, the apex (♀) wholly different from the preceding, being evenly parabolic from side to side, the middle of the apex rather narrowly rounded, with a very minute and feeble notch, the surface not impressed; in the male the apical sinus is nearly as in *montana;* hind tarsi rather short, about as long as the tibiæ in both sexes. Length (♂♀) 12.8–15.0 mm.; width 4.8–5.5 mm. Alberta (Lethbridge),—J. Harms..... **calgaryana** n. sp.

The above forms are all unequivocally specific in nature, differing among themselves in important structural features. The difference in form of the abdominal apex in the female of *nebraskana* and *calgaryana* is indeed remarkable. I regret being unable to give a complete table of this interesting group; so many of the forms allied to *longilabris* are unrepresented in my material, that it is scarcely worth while to attempt a full report. My previous statements in regard to *nebraskana* and the Lethbridge specimens are erroneous and were due to the fact that I did not at that time have the true *montana* in my collection.

In the *nigrocærulea* group it is sufficiently evident from an example of *robusta* Leng, which is now before me, that my *feminalis* does not differ except varietally, *robusta* being of a dull sericeous green and *feminalis* blackish-blue, with the same sericeous lustre; in the female of both forms the juxta-sutural shining depressed punctured spot near basal fourth is evident. In my opinion both *robusta* and *feminalis* should be considered subspecies of the apparently larger *nigrocærulea*.

The recent acquisition of the true *pusilla* of Say, enables me to make some more usefully definite statements than were possible

last year. In the first place, *cinctipennis* of LeConte, is a different species from *pusilla* and is not by any means a variety; this can be seen at first glance by reason of the relatively smaller head and less prominent eyes, as well as the paler coloration and stronger elytral sculpture of *cinctipennis*. I assume *cyanella* Lec., to be the green or blue form occurring in more northern regions and having still stronger and more asperate punctures. *Cyanella* is a subspecies of *cinctipennis*. *Terricola* Say, still remains unknown to me. The following is a subspecies of *pusilla:*

Cicindela pusilla ssp. **sayanella** nov.—Form and size, the broad head and prominent eyes as in *pusilla*, the elytra not quite so sombre in ground color, being very obscure coppery-brown, the punctures similar, sparse and fine, but becoming stronger, closer and metallic apically; the markings consist of a slender and feebly arcuate humeral lunule, a slender and entire apical lunule, inflexed at its anterior end and a short median marginal streak, which is obtusely angulate internally at its middle point; legs and tarsi (♀) a little shorter than in the female of *pusilla*; truncate lobe of the last ventral more impressed than in that species. Length (♀) 10.0 mm.; width 3.4 mm. (Monroe Cañon, Sioux Co., Nebraska.)—Knaus.

In both male and female of *pusilla*, the elytral punctures are fine and notably sparse from base to apex; the labrum is more strongly lobed and tridentate than in the female of *pusilla* and more nearly as in the same sex of *cinctipennis*. *Sayanella* is probably the form indicated by Say as a variety of *pusilla*.

The following is a distinct member of the *pusilla* group:

Cicindela tularensis n. sp.—Outline and size nearly as in *pusilla*, the ground color above obscure coppery-brown; under surface not very brilliant metallic blue-green throughout, with rather dense white hair on the sterna of the hind body and sides of the abdomen, the prosternum glabrous, its parapleura sparsely hairy; legs very slender, black, slightly metallic, the tibiæ and tarsi in great part pallescent; head rather small, but little wider than the prothorax, the latter subquadrate, only a little narrowed behind, larger in the female, finely, densely sculptured; elytra somewhat cuneiform, widest posteriorly, with nearly straight sides, having small sparse and very unevenly distributed punctures, each within a conspicuous ocellate spot, which is blue centrally and gray peripherally, the foveæ of the irregular subsutural series very small and inconspicuous. Length (♂♀) 9.5–10.3 mm.; width 3.3–4.0 mm. California (Tulare Co.). Four examples, received under the name *lunalonga* var. *tuolumnæ*.

In one male the pale markings on the elytra consist of a very slender humeral lunule, a very fine linear apical lunule, rectilinearly

deflected at right angles anteriorly and a short medial submarginal streak, from the middle of which proceeds internally a very fine elbowed band, which is abruptly much enlarged at its posterior end. In another male the humeral lunule is still finer and shorter, but there is on the disk before the middle at inner fourth, an elongate dash, which represents the posterior end of the long lunule of *lunalonga*, the other markings nearly as in the first male. In the third male there is no trace of pale maculation at any part of the elytra, which is the case also in the single female. Although doubtless allied to *lunalonga*, from Sierra Co., this species seems to differ in the conspicuous ocellated elytral spots, very inconspicuous foveæ and very slender and not "broad" apical lunule.

This is the species that I had previously thought to be *tuolumnæ* Leng, from the Hetch Hetchy Valley, but that is described as sericeous green and with the elytra not visibly punctate. It is my opinion that we have in the Sierras these three species, which are mutually distinct and valid, but if the final verdict be otherwise, *tuolumnæ* and *tularensis* will form well marked subspecies of *lunalonga*, which should in any event be regarded as valid with reference to *pusilla*.

The two following species may be placed near *denverensis* in the *purpurea* group:

Cicindela pugetana n. sp.—Form rather narrow and convex, small in size, alutaceous, bright green throughout above and beneath, the elytral margins brighter green, smoother, less punctate and with a feeble violaceous reflection by oblique illumination; head (♂) densely pubescent on the front medially; labrum pale, with fine black anterior edge, the median lobe advanced and sharply tridentate; prothorax much narrower than the head, slightly transverse, moderately narrowed basally, uniformly green and finely, very densely sculptured; elytra two-thirds longer than wide, not quite twice as wide as the prothorax, closely, granularly punctate, the type without trace of humeral spot but with a very minute pale spot representing the posterior end of a humeral lunule, also with an externally attenuated triangular spot at the apex and with a slender elbowed median band, not attaining the sides; terminal abdominal sinus broadly parabolic; sides of the prosternum with long conspicuous pubescence, the remainder of the under surface glabrous or nearly so; legs slender, the middle tarsi a little longer than the tibiæ. Length (♂) 11.5 mm.; width 4.4 mm. British Columbia,—Knaus. A single example.

Differs from the male of *denverensis* in its much less pubescent head and prothorax, coarser and stronger granuliferous elytral

sculpture, in having the palpi entirely black, the second joint of the labial being very pale straw-yellow in *denverensis*, in the less evident pubescence of the under surface and in having the long white coarse hairs along the external sides of the tibiæ very dense and conspicuous; in *denverensis* there are only very sparse erect white bristles along the tibiæ.

Cicindela parallelonota n. sp.—Body nearly as in the preceding, alutaceous and bright green, with blue reflection by oblique light throughout above, more shining and greenish-blue beneath, the legs metallic green; head (♀) loosely pubescent throughout, the occiput glabrous, the frontal convexity more densely pubescent; labrum as in the preceding but with the median lobe rather less prominent, though even more sharply tridentate; prothorax shorter and broader, transverse, narrower than the head, similarly sculptured and with deep transverse impressions; elytra nearly similar in form and proportion, very gradually smoother, bluer and more shining toward the sides, with not very close-set but sharply granuliferous moderate punctures uniformly distributed throughout, the type with a slender but complete humeral lunule, a broader complete apical lunule, which is broadly dilated and inflexed anteriorly and, at the middle of the length between the median line and lateral sixth, a broad transversely parallelogramic isolated white spot; under surface with long coarse and rather sparse white hairs laterally; tibiæ with sparse erect white hairs; palpi black throughout. Length (♀) 11.8 mm.; width 4.7 mm. Nevada (Las Vegas),—Spalding.

The three species *denverensis*, *pugetana* and *parallelonota*, form a very well defined group of the genus, not very closely allied to any other but includable within the limits of the *purpurea* group; they are all distinctly isolated and are apparently true species. *Sierra* Leng also seems to be assignable to this *denverensis* group.

I have recently received a specimen of *albertina* taken by Prof. L. Bruner at Worland, Wyoming. It does not differ from the Alberta types. It is quite distinct in appearance from *decemnotata*.

The three following forms belong to the *tranquebarica* group. I will describe them as species, for they are all distinctly different from any heretofore published, but will designate their closest allies.

Cicindela wichitana n. sp.—Body rather small in size and of stout abbreviated, moderately convex form, dull in lustre and dark coppery-brown to obscure green throughout above, the elytra a little brighter greenish or coppery laterally and the bottoms of the pronotal sulci finely blue; under surface bluish-green, the prosternal side-pieces coppery; head and eyes moderately developed, sparsely pubescent, densely on the frontal umbo; labrum rather short, the median lobe acutely tridentate;

prothorax barely (♂) to distinctly (♀) narrower than the head, a third to two-fifths wider than long, finely, densely sculptured; elytra marked throughout nearly as in *tranquebarica*, with the punctures rather small and not close-set, though more distinct than in that species, more abbreviated in form and with the fine prolongation of the humeral lunule less oblique; legs and tarsi more slender; tip of the abdomen (♀) differing in being canalicularly impressed apically. Length (♂ ♀) 11.8–12.0 mm.; width 4.9–5.2 mm. Kansas,—Knaus. Four specimens.

This may prove to be more properly a subspecies of *tranquebarica*, but it differs in its very much smaller size and in other ways as detailed above.

Cicindela lassenica n. sp.—General form and ornamentation nearly as in *tranquebarica* but differing remarkably in coloration, deep black throughout above, beneath and on the legs, without trace of metallic coloration at any point, very dull in lustre above, rather shining beneath; head (♂) moderate, with long sparse hairs, which are dense on the frontal umbo; labrum rather short, tridentate medially; prothorax large, transversely quadrate, fully one-half wider than long and as wide as the head, densely sculptured; elytra oblong, parallel, with less arcuate sides than in *tranquebarica* but with identical maculation, the middle band similar, the posterior arm short and not long as it is in *vibex* and *kirbyi*; punctures fine, feeble, close-set and strongly granuliferous, the ground very opaque; under surface moderately hairy toward the sides, coarsely on the propleura; legs moderate. Length (♂) 13.5 mm.; width 5.3 mm. California (without further indication of locality).

Though similar to *tranquebarica* in its markings, I hardly think that the taxonomic value of this form can be less than specific.

Cicindela moapana n. sp.—Habitus similar to that of *vibex* and *kirbyi* but larger and with more elongate and larger elytra, dark coppery-brown, the head and pronotum a little brighter, cupreous, the bottom of the deep sulci blue; sides of the elytra smoother, more shining and rather bright coppery-red; under surface more shining, blue-green, the side-pieces of all the sterna bright coppery; legs cupreous-red; head (♀) well developed, with sparse white hairs, which are dense on the frontal umbo; labrum short, pale, with black anterior edge, acutely tridentate; prothorax equal in width to the head, transverse, slightly narrowed from apex to base, sculptured densely as usual; elytra large, more than one-half longer than wide, subparallel, with feebly arcuate sides and with almost circularly rounded apex in posterior third, the humeral lunule as in *vibex*, the apical as in *kirbyi* but much broader, the median band unlike anything else in the group, consisting solely of the posterior arm as seen in *kirbyi*, the portion from the angle to the sides wholly obsolete and without the faintest suggestion caused by irregularity of sculpture, the latter being perfectly even over the place which is occupied by the transverse part of the band in the allied species; legs rather long, the hind tarsi short, not as long as the tibiæ. Length (♀) 15.0 mm.; width 6.2 mm. Nevada (McGill, White Pine Co., 6500 feet).

Either this and the preceding should be regarded as distinct species or all the forms in the true *tranquebarica* subgroup should be placed as subspecies and varieties of the latter; I hold strongly to the first view.

In the *repanda* group the following is a rather well marked relative of *ancocisconensis:*

Cicindela ancocisconensis ssp. **dowiana** nov.—Similar to *ancocisconensis* in general facies but a little larger and more elongate, rather smoother and of a paler brown color; prothorax not quite so transverse but similarly nearly as wide as the head; elytra larger and longer, the fine punctures much less close-set, the rather fine pale maculation similar, except that the humeral lunule is notably longer; tarsi similarly rather short. Length (♀) 14.0 mm.; width 5.3 mm. New York (De Bruce),—R. P. Dow.

This form can be distinguished at once from typical *ancocisconensis* on direct comparison; my series of the latter is very homogeneous and is from North Carolina (Asheville) and Buffalo, N. Y.

Having now at hand a topotype of *apicalis* of the *togata* group, from Kackley, Ks., perfectly matched by another from Lincoln, Neb., I am able to compare the three described forms more intelligibly. *Togata* and *apicalis* have the same slender outline, but in the former the apical elytral spine of the female is very far retracted, projecting from the sutural margin far from the tip; in *apicalis* this spine is nearly but not quite at the apex and it differs furthermore from *togata*, in having the short projection at the position of the median band more acutely angulate, its anterior slope more rectilinearly oblique and the reëntrant angle behind the humeral part more acute. In *globicollis* the body is shorter, the elytra relatively more inflated posteriorly and the elytral markings almost exactly as in *togata*, but the elytral spine is nearly at the apex as in *apicalis;* the prothorax differs from either in being more inflated at the median part of the sides. It is probable that both *apicalis* and *globicollis* should be considered subspecies of *togata*, in spite of the markedly different position of the apical spine of the elytra in *togata*.

The following is a distinct species of the *togata* group:

Cicindela fascinans n. sp.—Nearly similar in outline to *globicollis*, rather bright coppery-brown, the head throughout with short decumbent stout white hairs, notably close-set and even, the prothorax with slightly longer and less close-set hairs of the same kind, the under surface green

and cupreous, with very dense white hairs, glabrous only along the middle, more broadly on the sterna; eyes large and prominent; labrum (♂) short, with a single small acute medial tooth; prothorax much narrower than the head, nearly as long as wide, convex, parallel, with strongly and evenly rounded sides; elytra subparallel, acutely ogival at tip, white throughout, except a cupreous sutural region broad at base, narrowly ending at two-thirds, its lateral outlines bilobate; white area minutely and sparsely, the cupreous strongly and closely, punctate; serrulation of the apices very fine, the sutural spine strong and acute; legs very slender, cupreous and green. Length (♂) 9.8 mm.; width 3.4 mm. New Mexico (Santa Rosa),—Knaus.

This is a very interesting form, much smaller in size than *togata* and of very different ornamentation.

In the *marginata* group, *amnicola* should be given specific rank and *mundula* attached thereto as a subspecies or variety.

Cumatilis and *collusor* are merely subspecies of *rufiventris*, but *hentzi* is a different species, allied to *16-punctata* and *sonorana* but distinct from either. *Beckeri* W. Horn, is allied to *sonorana* but is smaller, more slender and much more brilliantly cupreous on the head and prothorax; I have in my collection a good series of five examples taken by Townsend in Chihuahua.

II—SOME OBSERVATIONS ON THE CARABIDÆ INCLUDING A NEW SUBFAMILY.

A few more or less interesting new Carabid species and subspecies have been in my collection for some time, awaiting a convenient opportunity for publication. It would be better to have had them appear in the course of systematic work, but as the groups to which they pertain have in most instances been studied monographically in comparatively recent times, it will be easy to make the necessary interpolations.

Subfamily CARABINÆ.

Tribe CYCHRINI.

The singularly isolated habitus of the species in this section of the Carabidæ, as well as their frequent rich metallic coloring, has caused them to receive a large amount of attention from collectors of the Coleoptera, but taxonomically they are rather difficult to deal with. The following seem to be some rather evident novelties in this tribe:

Irichroa æneicollis ssp. **tricarinata** nov.—Form nearly as in *æneicollis* but rather narrower and more elongate, black, without metallic reflection at any part, except a very feeble greenish glint on the pronotum; head and antennæ nearly similar; prothorax similar in form and size, except that the sides are not sharply angulate but prominently rounded, the surface more rugulose transversely, the longitudinal impressions a little more acutely and deeply impressed and the basal margin relatively narrower; elytra nearly similar but rather more elongate and less convex, the striæ with even coarser and more crowded punctures and with intervals 4–8–12 elevated, becoming feebly cariniform basally; tarsi nearly similar. Length (♂) 18.5 mm.; width 7.7. mm. North Carolina (Blue Ridge Mts.),—Beutenmüller.

The geographical habitat is different from that of *æneicollis*, which has occurred so far only on the Black and Balsam Mts. of North Carolina and Tennessee; it is a distinct species and by no means a subspecies or variety of *andrewsi*.

Sphæroderus lecontei ssp. **diffractus** nov.—Similar in general form and habitus to *lecontei* but more slender and very much smaller, shining,

black, with violet lustre, the elytra obscure cupreous; under surface and legs deep black; head as in *lecontei*, the antennæ relatively distinctly shorter, slender; prothorax as in *lecontei* throughout but with the sides more prominently rounded medially, the base similarly bi-impressed and sparsely punctured between the foveæ; elytra nearly similar but narrower, the strial punctures less distinct and all the intervals irregularly broken up and tuberculiferous apically and in about lateral third, except basally; anterior tarsi (♂) less strongly dilated, the first joint rather longer than wide. Length (♂) 10.0 mm.; width 4.6 mm. New Brunswick.

The head and prothorax are relatively a little smaller than in *lecontei* and the hind tarsi still shorter, the anterior tarsi of the male are much less dilated and the elytral sculpture more confused laterally.

Brennus Mots.

This group of the Cychrini, whether wholly valid as a genus or not, is at any rate very definitely circumscribed. The conditions prevai ing within it are similar to those pertaining to *Omus* and *Euschides*; that is to say, we see a geologically recent type splitting into a most confusing variety of subordinate forms, due principally to geographic isolation in mountainous country, but at the present stage of development exhibiting a process of segregation nto a more limited number of tolerably definite primary or stem forms, with many allied subordinates in each case. I have no doubt at all that these satellites of the more definite stem forms should be called subspecies, but to go further and discriminate such categories as varieties, aberrations and monstrosities, is wholly unwarranted at the present stage of knowledge. It is also a very difficult matter to decide, with our present lights, just which should be considered stem forms and thus receive the designation of species, and which should continue as subspecies. That Dr. Roeschke has carried the lumping too far is I think self-evident. For example, under *ventricosus* he places both *striatus* Lec. and *fuchsianus* Riv., in subordinate rank; this is clearly unwarranted, for they both differ profoundly from *ventricosus* Dej., in general habitus and other characters of moment in this genus. The author has also, quite without any sort of warrant, suppressed my *symmetricus* as a monstrosity, but for what reason is unknown; it is altogether isolated in general habitus and gives no indication of being an aberration in the usual meaning of that word; but only the single char-

acteristic of sculpture was considered by him. Again, without any kind of justification, he has relegated to inferior rank *compositus*, *porcatus* and *insularis* Csy., on pure assumption; his views in regard to these four species are certainly erroneous. The finely reflexed, completely non-metallic elytral margins and the general facies of *porcatus* are more nearly as in the *obliquus* series, although the supra-orbital seta shows that it must be associated with *dissolutus*. *Dissolutus*, it seems, was not represented in my collection when I drew up my revision of *Brennus*, but I have since received a specimen taken by Dr. Blaisdell at Mokelumne Hill, Calaveras Co.; it is closely allied to *interruptus;* the elytra are more shining and the elytral margins moderately metallic and more broadly reflexed than in *porcatus;* the female of the latter is also now at hand, from the same source as the male type; I had confused it with the female of *opacicollis*, they are mutually so very similar. The forms allied to *interruptus* and *dissolutus* are in a condition of decided incertitude and confusion. The author has given very little attention to points that must be of considerable taxonomic value, such as the number of elytral striæ, metallic or non-metallic elytral margins and structure of the anterior male tarsi and his separation of the *oreophilus* section because of a feeble incurvature of the thoracic base, is a rather weak feature; this feeble sinuosity exists also in *productus* described below.

In regard to my previous work in this genus, which is so severely condemned by Dr. Roeschke,* I have only to say that conditions were such at that time that I could not consult all the original literature and had to rely upon the identifications of my predecessors, so far as possible. It is for this reason that I failed to

* The generally undisguised animus toward me and my work, exhibited by Dr. Hans Roeschke in the course of his Monograph on the Cychrini, is quite unaccountable, for such a personal attitude was entirely unnecessary in a critical review. The intimation made on page 102, with the most amusing naiveté, that my "Arten" have in every instance proven to be spurious or to be masquerading under false pretenses, will be in considerable part controverted under more reasonable and unbiased comparative study from the types. It would have been at least in better taste had the author given the benefit of the doubt to his fellow worker, in those cases where he could not be sure, because of lack of authentic material. As a matter of fact neither Dr. Roeschke nor his active helper in this country, Dr. Van Dyke, has ever written me a line concerning my collection or has ever had so much as a glimpse of any of my types or evinced any desire whatever to see them. His work contains many errors of identification, which I hope it may be my pleasure to demonstrate to him eventually.

identify *ventricosus* (*sinuatus* Csy.), *interruptus* and *dissolutus* properly, but from what I can glean from the Roeschke monograph, my identification of *ventricosus* was the large form called by him *lativentris* Mots.; it was in no sense the *fuchsianus* of Rivers, as stated by the author. My identification of *striatopunctatus* Chd., was the form which the author calls *alternatus* Mots. My determination of *ovalis* Mots. is correct, as it agrees thoroughly with the description and particularly with the careful figure given by Motschulsky. *Gentilis* Csy., is a valid subspecies at least; it has smaller punctures than *crenatus* Mots., and is stouter in form in both sexes. *Opacicollis*, *convergens* and *sculptipennis* are distinct among themselves and are not all varieties of *obliquus*. *Basalis* is a valid species and *duplicatus* is rather more than a subspecies of *cristatus*. One source of trouble is that Dr. Roeschke does not know my work very thoroughly, because of frequent failure to grasp my meaning, probably largely because of unfamiliarity with the English language; the consequence is that he has failed to identify my species correctly. Another origin of discord is the fact that we evidently have radically different ideas as to the meaning of the word species; this is a matter of opinion, the correctness of which need not greatly concern us, as it will be definitely adjudicated under the light of future knowledge; the question now is more essentially one regarding absolute synonymy, but in the Roeschkean sense, a synonym need not necessarily be a synonym.

The following are some additional forms in this genus:

Brennus rugiceps ssp. **congener** nov.—Body moderately ventricose and convex, deep black, shining, the pronotum opaculate; head in almost every way as in *incipiens*, the irregular crest having an elongate crater-like posterior excavation, partially closed posteriorly by a short longitudinal ridge; prothorax differing decidedly, smoother and more opaque, slightly elongate, the sides subangularly widest before the middle, thence oblique and straight to the subbasal sinus, thence subparallel and straight for a considerable distance to the basal margin, which is transverse to feebly sinuato-truncate and half the maximum width (♀), much less (♂); elytra less than one-half longer than wide, oval, rather transversely rounded at base, deeply but very irregularly 18-striate, the striæ moderately broken but easily traceable throughout at the sides, rather finely and indistinctly punctate, the intervals moderately convex, strongly so laterally; margins finely reflexed, not metallic; anterior tarsi (♂) with the first joint in apical third, the second and third wholly spongy-pubescent beneath, the fourth without trace of squamules. Length (♂ ♀) 12.5–14.5 mm.; width 5.8–6.7 mm. Oregon (Josephine Co.),—Nunenmacher. A single pair.

Differs from *incipiens* in the angulate sides of the prothorax, these being strongly but evenly rounded at the point of greatest width in *incipiens*, and in the latter the sides toward base are still converging, not subparallel as in *congener*; the pronotum is more shining and more coarsely rugulose in *incipiens*. Both of these forms are possibly subspecies of *rugiceps*.

Brennus productus n. sp.—Elongate, ventricose, only very moderately convex, black, alutaceous throughout, the elytra rather more shining; head as in *ventricosus* but much narrower, the labral lobes similar but less diverging; supra-orbital puncture feeble but evident; prothorax differing greatly, being small and narrow, more nearly as in *striatus*, fully as long as wide but apparently somewhat elongate, the sides anteriorly inflated and broadly rounded, thence oblique posteriorly, then sinuate, becoming straight and parallel for an unusually long distance before the base, this being fully a fifth the total length; sides strongly reflexed but not so strongly as in *ventricosus;* surface nearly as in the latter; base narrower and broadly sinuate as in *oreophilus*, one-half the maximum width; elytra evenly elliptic, one-half longer than wide, finely but deeply about 17-striate, the striæ very regular and with rather small punctures, becoming coarser laterally, the striæ outside the thirteenth much confused and barely traceable; intervals convex; margins strongly reflexed, not metallic; anterior tarsi (♂) nearly as in the preceding throughout. Length (♂) 15.7 mm.; width 7.0 mm. California (exact locality unrecorded but probably coastal).

The general appearance of this species is unlike any other known to me but seems to approach *striatus* more closely than *ventricosus;* the probabilities are that it will prove to be of specific rather than subspecific value and it is therefore so announced.

Brennus integer n. sp.—Body small in size, strongly ventricose, very shining and deep black throughout, the reflexed margins of the elytra violaceous; head moderate, smooth and shining along the middle, with a supra-orbital seta; antennæ slender, about as long as the elytra; prothorax relatively small, rather wider than long, the sides inflated and evenly rounded anteriorly, rapidly very oblique posteriorly, abruptly sinuate near the base, the sides thence parallel and straight to the base, which is transverse and distinctly less than half the maximum width; surface shining, finely subrugulose, feebly impressed along the sides, the transverse impressions and median stria strong, the margin strongly reflexed; elytra oval, obliquely attenuate and sharply pointed posteriorly, very convex, with fourteen deeply impressed striæ, complete and perfectly regular throughout the width, not at all confused laterally, the punctures not large and but slightly crenulating the very convex and perfectly even intervals throughout, the latter very highly polished; male with the anterior tarsi rather feebly dilated; joints two and three and less than apical third of the first densely spongiose beneath. Length (♂) 12.4 mm.; width 5.8 mm. California (Sta. Cruz).

This species is about the smallest of the *interruptus* series and may be placed near *corpulentus*, which however has about fifteen striæ, irregular laterally and without trace of metallic margin.

Brennus oreophilus ssp. **humeralis** nov.—Smoother and more ventricose than *oreophilus*, shining, the pronotum similarly smooth and opaculate; head nearly similar; prothorax relatively somewhat smaller and narrower, fully as long as wide and apparently a little longer, the anterior angles more rounded, the sides posteriorly similarly oblique and feebly sinuate; base slightly sinuate and one-half the maximum width; surface and margins nearly as in *oreophilus;* elytra differing decidedly, more inflated, barely a third longer than wide, the sides rapidly rounding inward at base to the thoracic base, the humeri thus more evident than in any other form of the genus, the apex acutely ogival; surface very convex, rather finely striate, the striæ finely, not closely punctate, very much finer and more finely punctate than in *oreophilus*, confused in nearly lateral third; male with the anterior tarsi distinctly dilated; joints two and three and apical half of the first densely spongy-pubescent, the fourth without squamules. Length (♂) 15.0 mm.; width 7.0 mm. California (Mokelumne Hill, Calaveras Co.),—Blaisdell.

In the male of *oreophilus* the anterior tarsi are rather less dilated but similarly clothed beneath, except that the first joint is densely clothed in rather less than apical half; the elytra are more evenly rounded at the sides basally and the elytral striæ, and especially the punctures, are much coarser. From *hoppingi* Roe., in which also the humeri are somewhat more evident than in *oreophilus*, *humeralis* may be known at once by the much shorter, more finely punctate and more shining elytra, more distinct humeri and less sinuate oblique sides of the prothorax.

The Sierra form placed with *lativentris* Mots., by Dr. Roeschke is not exactly the same, the general habitus is very similar but the prothorax is somewhat shorter and broader.

Maronetus n. gen.

In describing *Pseudonomaretus*, Dr. Roeschke failed to indicate any type species and, as he included two distinct genera under that name, I will here designate the large and conspicuous and more completely striate species *relictus* Horn as the type; *regularis* Lec., *merkeli* Horn and *idahoensis* Webb, will also form part of *Pseudonomaretus* and perhaps one or two other similar forms. Under the name *Maronetus*, I have separated the smaller and more slender species, with less complete elytral striation, of which the following may be regarded as the type.

Maronetus tenuis n. sp.—Form slender, very convex and shining, somewhat piceous-black, the legs piceous; head scarcely two-thirds as wide as the prothorax, the eyes moderate; labral lobes very slender, the notch almost attaining the base; front smooth; supra-antennal edge strongly elevated; antennæ slender, testaceous, not quite two-thirds as long as the body, the basal joint not quite as long as the next three combined; prothorax narrow, longer than wide, the sides inflated and evenly rounded anteriorly, oblique and straight thence to the base, which is feebly sinuate medially, two-thirds the maximum width and slightly wider than the apex, the latter truncate, with obtuse and broadly rounded angles; surface smooth, the transverse impressions rather sharply marked, the stria connecting them along the middle distinct, the basal foveæ deep, short, impunctate, separated from the margin by a thin cariniform wall; lateral edges without trace of reflexed margin; elytra elongate-oval, three-fourths longer than wide, less than twice as wide as the prothorax, the sutural stria coarse, deep, coarsely punctate, extending from near the base to apical third, the second stria much less coarse and more finely punctate, extending less closely to the base and obsolete behind the middle, the third stria represented only by a very fine feeble impunctate impressed line, very short and only visible by very oblique illumination; all the other striæ completely obsolete, the surface very smooth and polished; the fine marginal stria is visible feebly near the apex; reflexed margin extremely fine; legs slender, the hind tarsi rather short, slender. Length (♀) 6.8 mm.; width 2.1 mm. North Carolina (Black Mts.),—Beutenmüller.

This remarkable species, the smallest of our Cychrini, may be distinguished at once from *imperfectus* Horn, with which it has been confounded, by the complete absence of any trace of a reflexed lateral thoracic margin, by having only two elytral striæ and by its smaller size and more slender form. In *imperfectus* the prothorax is much less narrow than in *tenuis* and there is a distinct and entire though rather feebly developed reflexed thoracic margin. The setigerous puncture at two-fifths from the apex—the point of maximum width—is as well developed as usual; the subbasal puncture and seta are rather small but distinct. This genus, besides *tenuis* and *imperfectus*, will comprise a number of other species such as *hubbardi* and *incompletus* Schwarz and *schwarzi* Beutenmüller.

Tribe CARABINI.

Calosoma Weber.

I have recently received from Mr. Knaus three specimens in this genus that are of peculiar interest. One of them is the true *prominens*, of LeConte, taken at Phoenix, Ariz., and hitherto not

represented in my collection; it is obviously widely different from *peregrinator*. Another is an example of *carbonata* Lec., from Oak Creek, Ariz., its most western limit of range known to me. *Ingens* Csy., is, I think, a distinct species and not a subspecies; it has a much shorter and relatively broader hind body than in *peregrinator* or *carbonata* and is of very much larger size than *amplipennis*. All of these species and subspecies, together with *apacheana* Csy., form a group distinguished by the rather large head, long antennæ, more or less feebly angulated sides of the prothorax and feeble elytral sculpture. The third specimen represents an undescribed species, which may be known as follows:

Calosoma clemens n. sp.—Size very much smaller and more slender, deep black, rather shining; head and prothorax relatively much smaller than in the *peregrinator* group, the former with very prominent eyes; vertex sparsely but rather coarsely punctate; mandibles with the incurved apex very acute, strongly, transversely rugose throughout above; antennæ slender, shorter than in *peregrinator*, extending to basal fifth or sixth of the elytra, the third joint as long as the next two; prothorax three-fourths wider than long, conspicuously small in size, the sides obtusely angulate at the middle, strongly rounded anteriorly, oblique and nearly straight posteriorly; base feebly sinuate at each side, the posteriorly produced angles small and acute, somewhat everted at tip; surface feebly convex, very finely punctulate and confusedly creased, moderately and rather sparsely punctured along the sides and apex and more coarsely punctured and rugose along the base; latero-basal impressions rather narrow and deep; sides somewhat broadly and feebly concavo-deplanate, the edge very moderately reflexed; elytra nearly three-fourths longer than wide, almost twice as wide as the prothorax, very slightly wider at apical fourth than at base, the sides very feebly arcuate, the apex obtusely ogival; surface with fine striæ of minute punctures, connected by transverse and rather deep coarse lines basally and laterally, the foveæ very minute; lateral margins somewhat broadly reflexed and just visibly metallic steel-bluish; legs slender, rather short, the hind tarsi three-fourths as long as the tibiæ; anterior tarsi (♂) as in *peregrinator* but rather less dilated. Length (♂) 20.0 mm.; width 8.2 mm. Nevada (Las Vegas),—Spalding.

This species belongs to the *prominens*, *parvicollis*, *subgracilis* section of the genus, which is well distinguished from the *peregrinator* section by the smaller head; the sides of the elytra basally are feebly serrulate in both these sections, but in *lugubris*, with which *peregrinator* is compared by Bates, these serrulations are obsolete; the *prominens* referred to by Bates at the same place in the "Biologia," is undoubtedly *parvicollis* Fall and not the true

prominens Lec. *Subgracilis* was when described represented by the male alone, the female also is now at hand; it agrees thoroughly with the male in general form and habitus but is much larger; it is a narrower, more elongate and polished species than *peregrinator* and has a distinctly smaller head, showing that it belongs with the *prominens* series.

Calosoma semilævis ssp. **davidsoni** nov.—General habitus, lustre and sculpture as in *semilævis* but more elongate, with the prothorax much smaller, less transverse and having the parallel sides much less rounded; elytra a little smoother and more shining. Length (♂♀) 21.0–24.0 mm.; width 9.4–10.5 mm. California (Alameda Co.).

This is the variety alluded to in my previous article on *Calosoma* (Mem. Col. IV, p. 65); its appearance is very distinct from that of *semilævis* and it should be designated by name; it is named in honor of Dr. George Davidson. *Semilævis* is common near San Francisco; there is one example in my series which does not seem to differ, marked Guadalupe Island.

Subfamily PTEROSTICHINÆ.

Adrimus Bates.

The following species seems certainly to belong to this genus, which is disseminated in very moderate number from the Amazon regions to Mexico:

***Adrimus panamensis** n. sp.—Moderately stout and convex, strongly shining throughout, the elytra with evident iridescent lustre, piceous-black in color, rather paler beneath, the legs throughout and the palpi pale flavo-testaceous; head smooth, nearly three-fourths as wide as the prothorax, with large and prominent eyes, the foveæ impressed and oblique, the palpi very slender; antennæ slender and filiform, rather more than half as long as the body, feebly infuscate, clearer testaceous basally; prothorax about a third wider than long, widest before the middle, the sides broadly, evenly rounded, slightly converging basally, becoming feebly sinuate at the hind angles, which are finely acute and prominent; base transverse, beaded only laterally, a little wider than the apex, which is moderately sinuate, with rather distinct angles; surface smooth, finely reflexed at the sides, without trace of transverse impressions and extremely minutely, sparsely and feebly punctulate throughout at base, the stria very fine, not entire, the foveæ elongate, narrow, linear and moderately impressed; elytra barely two-fifths longer than wide and about one-half wider than the prothorax, parallel, with rather arcuate sides and rapidly ogival apex, the sinus feeble, the fold evident; striæ fine but rather deeply impressed, finely, closely and very evenly punctate,

the punctures gradually obsolescent apically, the scutellar stria completely wanting, the fovea distinct; intervals moderately convex, the third with a substrial puncture just behind basal third; lateral line of foveæ not interrupted; hind tarsi slender, filiform, the basal joint about as long as the next two and a little longer than the fifth; anterior tarsi (♂) moderately dilated, biseriately and closely squamulose beneath, the middle tarsi very slender and unmodified. Length (♂) 6.0 mm.; width 2.15 mm. Isthmus of Panama (Colon),—Beaumont.

To be readily known from *olivaceus* Bates, from Guatemala, by its smaller size and, though nearly similar in outline to that species as figured, it seems to differ so radically in its obsolete anterior thoracic impression, feebler foveæ, very much finer basal punctures and not at all explanate basal angles, that a different though closely related genus may be indicated. The sides of the prothorax have a seta behind apical third and another smaller at the hind angles.

Subfamily CHLÆNIINÆ.

Chlænius Bon.

The following forms, some specific and some which may be regarded at present as of subordinate value, may be conveniently defined at the present opportunity:

Chlænius regularis ssp. **apacheanus** nov.—Form and facies somewhat as in *regularis* Lec., feebly shining, the elytra opaculate; upper surface deep indigo-blue throughout, the under surface black, the legs rufous; head as in *regularis*, the antennæ similar but rather shorter; prothorax shorter, transverse, fully two-fifths wider than long, otherwise as in *regularis* throughout; elytra in form, sculpture and relationship with the prothorax nearly similar but more abbreviated; under surface nearly similarly but rather less densely punctured and pubescent; male with the anterior tarsi distinctly shorter, the punctures on the upper surface of the three dilated joints coarser, the second joint distinctly wider than long, the third but very little longer than wide. Length (♂ ♀) 13.0–13.5 mm.; width 5.5–6.0 mm. Arizona (southwestern) and the adjacent parts of California. Five examples.

Closely allied to *regularis* Lec., which is not a variety of *sericeus*, but differing in its smaller size, shorter prothorax and shorter and more punctate anterior male tarsi; in *regularis*, the dilated joints of the anterior male tarsi are feebly punctate on their upper surface, the second is quadrate and the third much longer than wide. It differs from *viridifrons* in its stouter form and entirely violet-blue upper surface.

Comparing a male of *sericeus* from New York with a male of *perviridis* Lec., from Siskiyou Co., California, a number of rather radical differences become apparent; the size, for example, of *perviridis* is smaller and the form more slender; the maxillary palpi, legs and tarsi are relatively shorter; if not specifically different, which I hold to be the case, *perviridis* is therefore, at any rate, a well defined subspecies of *sericeus*. The following is apparently another:

Chlænius sericeus ssp. **uteanus** nov.—Form narrower and more elongate than in *sericeus*, the elytra smoother; upper surface green, changing to violet by very oblique illumination, shining anteriorly, the elytra opaculate; head, antennæ and palpi as in *perviridis*, the antennæ, as well as the palpi, shorter than in *sericeus;* prothorax differing from either, being narrower and more elongate, nearly as long as wide, otherwise similar, except that the punctures are not quite so coarse or close-set; elytra differing from both in being more oblong and rectilinearly parallel and in having the striæ still finer and not in the least impressed even basally, the punctures basally not more evident as they are in both *sericeus* and *perviridis;* angle made by the basal and marginal beads more acute than in either; under surface less closely or coarsely punctured than in *perviridis*; anterior tarsi (♂) with the first three joints diminishing less rapidly in width than in *perviridis*. Length (♂) 14.0 mm.; width 6.0 mm. Utah (Provo),—Wickham.

The type of this subspecies undoubtedly presents a different appearance from the male of either *sericeus* or *perviridis*, but at the same time, I have two examples that were also taken at Provo by Wickham, that have a shorter prothorax and brighter green color, though similar otherwise, and I regard them as identical with *uteanus;* they differ in facies from *perviridis*, because of the more oblong and less oval elytra. My series of the true *sericeus* extends in locality from Rhode Island to Lake Superior and Arizona and displays no very noticeable variability.

The large series at hand show quite conclusively that *leucoscelis* Chev., and *cordicollis* Kirby are distinct species; the former is somewhat smaller in size and very much more slender in build, of a deeper indigo-blue color and differs in numerous other minor characters. The following are well defined species allied to *leucoscelis* and *cordicollis* respectively:

Chlænius gilensis n. sp.—Body much smaller than in *leucoscelis*, the elytra more parallel and more abbreviated; head nearly similar, the eyes still larger and more prominent; antennæ and palpi longer and more

slender; prothorax similar and dark steel-blue but with more numerous punctures anteriorly, basally and toward the median stria; elytra differing greatly in form; being parallel, with just visibly arcuate sides and only about one-half longer than wide, deep steel-blue, striate and punctured as in *leucoscelis* but with the interstitial punctures finer; broadly rounded reflexed edge at the humeri, the under surface and legs nearly similar. Length (♂ ♀) 12.0 mm.; width 4.9–5.0 mm. Arizona (Yuma). A single pair taken by the writer.

In *leucoscelis* the elytra are much longer and are gradually slightly inflated posteriorly, being widest behind the middle and with notably arcuate sides; in fact the habitus of the two species is very different. From a personal study of the type in the LeConte collection, the form described as *monachus* by LeConte, proves to be exactly the same as *leucoscelis* and does not approach *gilensis* in the characters described above.

Chlænius sanantonialis n. sp.—Somewhat similar to *cordicollis* but smaller and more abbreviated, dark steel-blue in color throughout above, the under surface black; legs and antennæ testaceous; head and antennæ nearly as in *cordicollis*, the prothorax also similar but much shorter, distinctly wider than long; elytra shorter and rather broader, with similarly rounded humeral edge and widest slightly behind the middle, the striæ coarser, more impressed and with coarser and more conspicuous punctures; intervals not so broad, feebly convex and with the fine punctures less close-set; under surface and sexual characters nearly similar. Length (♂) 13.5–14.0 mm.; width 5.2–5.7 mm. Texas. Two male examples, without more accurate indication of locality.

Distinguishable from *cordicollis* by its more abbreviated form, shorter and relatively broader elytra, with much coarser, more impressed and more coarsely punctate striæ and convex, less punctate intervals.

Chlænius sierricola n. sp.—Moderately elongate, rather depressed on the upper surface, shining and dark blue above, the elytra rather more obscure and opaculate; under surface black and shining, the legs and antennæ pale testaceous; head not longer than wide, smooth centrally, rugulose and punctate toward the eyes and basally; antennæ and palpi rather long and slender; prothorax two-fifths wider than the head and a third wider than long, the sides broadly rounded, slightly converging and distinctly sinuate basally, the base slightly wider than the apex; surface strongly, rather closely punctate, less closely and rather more irregularly so before about the middle; elytra three-fourths wider than the prothorax, rather more than one-half longer than wide, parallel and broadly arcuate at the sides, the basal and lateral beading forming a sharp angle; striæ very fine, feebly impressed, minutely punctulate, the intervals nearly flat, rather closely punctate, the punctures much larger

than those of the striæ though fine; pubescence fulvous; under surface punctured throughout, strongly and rather closely on the sterna; anterior tarsi (♂) with three dilated joints. Length (♂) 13.5 mm.; width 5.7 mm. California (Mokelumne Hill, Calaveras Co.),—Blaisdell.

There is no species very closely allied to the above, but it may be placed near *æstivus* for the present; the strial punctures are very minute and become apparent only under careful observation.

Chlænius cumatilis ssp. **sparsellus** nov.—Similar to *cumatilis* in general habitus but stouter and with larger prothorax, deep indigo-blue and opaculate throughout above; head as in *cumatilis* but with the antennæ slightly more elongate; prothorax much larger, a fourth wider than long, the sides more broadly and feebly rounded, similar basally and on the disk, except that the sparse punctures are much less coarse; elytra similar but broader, with the fine striæ less impressed and the fine punctures scattered over the intervals about twice as numerous; tarsi more elongate; under surface nearly similar, except that the punctures are more numerous, especially on the prothorax throughout. Length (♀) 15.0–16.0 mm.; width 6.2–6.7 mm. Arizona.

Distinguishable from *cumatilis*, from the coast regions near San Diego, by its rather larger size, stouter form, larger prothorax, which is less rounded at the sides and by the more numerous punctures.

Chlænius texanellus n. sp.—Body rather small in size and moderately convex, rather shining and pure indigo-blue anteriorly, the elytra more obscure, blackish-blue and opaque; pubescence very short, fine, obscure fulvous; head moderate, smooth and with rather large and very convex eyes; antennæ moderate, fusculate, the three basal joints paler; prothorax in outline and sculpture nearly as in *brevilabris*, the punctures rather less close-set; elytra oblong, barely one-half longer than wide, nearly one-half wider than the prothorax, the striæ fine, rather strongly punctate, the punctures perforate and much wider than the striæ; intervals flat, very finely, rather closely punctate, the punctures feeble and shining in the opaque ground; basal and marginal beads joining in a broadly rounded angle; under surface black, shining, distinctly and rather closely punctured throughout, the legs testaceous. Length (♂♀) 9.8–11.0 mm.; width 4.3–4.9 mm. Texas (Galveston).

This species is allied to *brevilabris* but is shorter and is always of a pure deep blue color; the elytral striæ are finer and the fine punctures of the intervals are much less asperulate. In a series of eleven specimens of *brevilabris* at hand, the pronotum is always bright green to coppery, while in a series of nineteen examples of *texanellus*, the pronotum is deep bright violet-blue, except in one where the blue is mixed with blue-green. The general outline is

shorter and relatively broader than in *brevilabris* and the head is smaller, with more conspicuous eyes.

Chlænius zunianus n. sp.—General habitus and structure as in *tomentosus* Say, but more elongate and parallel, deep black above, beneath and throughout the legs and palpi, the antennæ black, with the basal joint partially pale; pubescence short, much less close than in *tomentosus* and rather darker fulvous in color; head smoother, with only a few very minute punctures laterally and no rugæ; there is an isolated cluster of three or four coarser punctures about the setigerous fovea near each eye; prothorax in form and sculpture throughout almost as in *tomentosus*, except that the punctures are everywhere coarser in corresponding positions; elytra differing decidedly, oblong, parallel, more elongate, more rapidly obtuse at apex, a fifth wider than the prothorax, the striæ, strial punctures and humeral angle of the beading similar, the intervals about one-half as densely and less asperately punctate; under surface as in *tomentosus* throughout; prosternum margined. Length (♀) 14.0 mm.; width 5.9 mm. New Mexico (Fort Wingate),—John Woodgate.

Differs from *tomentosus* in its deep black color, more elongate and abruptly obtuse, much less densely punctate elytra, rather more transverse and somewhat less anteriorly narrowed and more coarsely sculptured pronotum and smoother head. From *insperatus* Horn, it differs in having the lateral and basal beads form a sharp angle at the humeri and in its dark fulvous and not black vestiture.

Chlænius pimalicus n. sp.—Body somewhat as in *chrysopleurus* Chd., but narrower and with uniform elytral coloration and flatter intervals, shining and vivid metallic green throughout the head and pronotum, except the convex lateral part of the latter basally, which is cupreous; elytra opaculate, bright green throughout, the smoother marginal interval rather brighter green; under surface, legs and tarsi black; vestiture short but stiff, fulvous; head smooth, with the frontal foveæ prolonged to a point opposite the middle of the eyes, where there is an additional short groove more inwardly; antennæ short, stout, piceous; prothorax in form and sculpture almost exactly as in *chrysopleurus* throughout; elytra differing greatly, being narrower, with much less convex, more opaque, more closely and much less strongly punctate intervals, the punctures of the much shallower striæ similarly very small; under surface nearly smooth but with more coarse sternal punctures than in *chrysopleurus*. Length (♀) 13.5–14.0 mm.; width 5.6–5.8 mm. Southern Arizona. Three examples from the Levette collection.

The differences as shown between this species and three examples of *chrysopleurus* from Guatemala and Honduras, which I have before me, are expressed above, but *pimalicus* is very much closer to *forreri* Bates, from Ventanas, Mexico, and may prove to be merely a subspecies of the latter. In *forreri* the elytra are described

and figured as virtually black, with the marginal interval bright green and not of a uniform vivid green throughout as in *pimalicus*; the tarsi, also, are said to be piceo-rufous.

Anomoglossus Chd.

This genus is well defined and differs from *Chlænius* in the absence of a tooth in the emargination of the mentum, more uniformly punctate abdomen and generally much more deeply emarginate labrum. The species are more numerous than hitherto supposed and six are now known; they seem to be confined to the nearctic faunal regions and are as follows:

Last joint of the maxillary palpi glabrous; body larger in size; labrum deeply emarginate.....2

Last joint with sparse stiff hairs; body of small size.....4

2—Punctures of the elytral striæ extremely minute, confined to the fine striæ. Body narrower and less ventricose, shining, metallic green, the elytra opaque and deep blackish-blue; under surface black and shining, the legs pale-testaceous; vestiture short, stiff, fulvous; head smooth, the occiput transversely sparsely punctate; frontal foveæ small, feeble and indefinite; antennæ slender, testaceous; prothorax but little wider than long, much wider than the head, convex, the sides very evenly and moderately arcuate from apex to the basal angles, which are slightly obtuse and blunt but distinct; apex almost truncate and but very little narrower than the base, which is broadly sinuate medially as usual; surface strongly and somewhat loosely punctate, gradually densely toward base and near the median line, which is strongly impressed; foveæ elongate and very deep, slightly oblique; elytra nearly three-fourths longer than wide, about a fourth wider than the prothorax, parallel and broadly arcuate at the sides, obtusely rounded at tip; striæ very fine; interspaces flat, finely, closely punctate, the punctures evidently stronger than those of the striæ; sterna throughout with very coarse and more or less close-set punctures, the abdomen finely, sparsely punctate. Length (♀) 11.5 mm.; width 4.35 mm. New York (central). **delectans** n. sp.

Punctures of the elytral striæ strong and coarser, rather wider than the striæ basally.....3

3—Body of rather large size, stout, elongate-oval, cupreous and moderately shining anteriorly, the elytra very dull and blackish-blue, with moderately long and rather fine, dull fulvous vestiture; under surface and legs throughout as in the preceding; head three-fifths as wide as the prothorax, rather rugulose, the occiput transversely and strongly punctate; mandibles rather elongate; frontal foveæ very small; antennæ long and very slender, testaceous; prothorax very nearly as long as wide, the sides broadly rounded, gradually converging anteriorly from the point of greatest width, which is well

behind the middle; apex nearly truncate, much narrower than the base, which is transverse, becoming anteriorly oblique laterally, the angles distinctly rounded; side margins more reflexed basally; surface nearly as in the preceding, except that the strong median stria is not at all impressed but sharply incised; elytra oval, with parallel arcuate sides, three-fifths longer than wide, nearly one-half wider than the prothorax; striæ deep; intervals not quite flat, finely and very closely punctate, the punctures very much smaller than those of the striæ; first three joints of the anterior tarsi (♂) dilated and very gradually diminishing in width. Length (♂) 15.0 mm.; width 6.25 mm. Mississippi (Vicksburg).....**gravis** n. sp.

Body somewhat as in the preceding in general habitus but smaller and much narrower in build, the anterior parts more brilliantly cupreous, generally greenish toward the sides, the elytra less opaque and of a clearer indigo-blue; head smaller but otherwise nearly similar, smoother, the rugæ of the preceding not visible; prothorax nearly similar, except that the sides are more evenly, feebly arcuate from near the base to the apex and the side margins are not or only very slightly more reflexed basally; surface otherwise similar; elytra nearly similar but much narrower, with finer and more deeply impressed, still more strongly and closely punctate striæ and more convex intervals, having the similarly close-set punctures a little stronger; under surface and tarsi nearly as in the two preceding. Length (♂ ♀) 11.0–14.0 mm.; width 4.4–5.35 mm. Rhode Island to Florida and westward to Tennessee and Indiana. Very common. **emarginatus** Say

4—Labrum feebly emarginate; prothorax with basal and apical widths almost equal. Body moderately small in size, the sides of the prothorax very feebly sinuate posteriorly, the hind angles slightly rounded; reflexed margin feebly elevated basally, the surface as long as wide, nearly flat, densely punctate, with well marked median line and deep elongate foveæ; elytra oval, wider than the prothorax, with strongly marked and distinctly punctate striæ and flat, finely and closely punctured intervals. Length 8–9.5 mm.; width 3.3–4.0 mm.—Description quoted from Dejean. Georgia..**amœnus** Dej.

Labrum deeply emarginate; prothorax generally more narrowed basally..5

5—Form moderately slender, not very convex, shining, metallic bluish-green anteriorly, the elytra feebly shining and obscure deep blue; under surface black, closely punctate throughout as in all the preceding species, the legs testaceous; head more than two-thirds as wide as the prothorax, smooth centrally, punctured sparsely toward the eyes and across the occiput, the eyes only moderately prominent; antennæ slender, testaceous, clearer basally; prothorax slightly shorter than wide, the sides evenly and moderately rounded to basal sixth or seventh, there sinuate and thence straight and parallel to the basal angles, which are right and sharply defined, the reflexed margin very fine and even throughout; apex feebly sinuate, a little wider than the base, which is transverse and rectilinear; surface broadly, evenly convex, moderately coarsely, deeply, rather sparsely and somewhat unevenly punctured throughout; median

line fine, not entire; foveæ sublinear, moderate in size and depth, continued to the hind angles by a gradually feebly deplanate area; elytra one-half longer than wide and nearly one-half wider than the prothorax, parallel, with broadly arcuate sides and circularly rounded apex; striæ fine, feebly impressed, very minutely punctate, except basally, where the punctures become rather strong and twice as wide as the striæ; intervals very feebly convex, rather finely but strongly, closely punctate and with short fulvous pubescence; femora rather distinctly though sparsely and unevenly punctate. Length (♂♀) 8.0–8.8 mm.; width 2.8–3.2 mm. New York to Iowa. [*Chlænius elegantulus* Dej.; *feisthameli* Laf.]..... **pusillus** Say

Form more abbreviated, the size much smaller; coloration, lustre and general habitus nearly similar; head relatively larger, nearly four-fifths as wide as the prothorax, similarly punctured; antennæ slender, not much over half as long as the body, testaceous, clearer basally; prothorax nearly similar in form and sculpture but more nearly as long as wide, the sides at base becoming straight only at, and not for some distance before, the basal angles, which are distinctly obtuse though sharply marked and not blunt; base becoming arcuately oblique at the sides, barely visibly wider than the subtruncate apex; surface not differing markedly, the foveæ a little smaller; elytra shorter, two-fifths longer than wide and two-thirds wider than the prothorax, parallel, with broadly arcuate sides, the apex much more rapidly and obtusely rounded; striæ still finer and less impressed, similarly but not quite so strongly punctate, the intervals similar but not so closely punctured or pubescent; abdomen with the fine punctures less uniformly distributed; femora less punctate; sterna similarly coarsely and deeply punctured throughout. Length (♀) 6.3 mm.; width 2.4 mm. Louisiana (Alexandria). **nanulus** n. sp.

These species seem to be amply distinct among themselves and doubtless a number of others are already included in collections. The subacute lobes of the labrum, in all the species, have a loose tuft of stiff yellow bristles, which are different from the ordinary setæ of the labral apex.

Brachylobus Chd.

The mentum in this genus is so radically different from the usual type in this subfamily, that a separate tribe might be organized to include it alone, so far as now known. The surface of the mentum is smooth and has two very deep impressed perforations; the apex has an extremely shallow sinus, with very short angulate lateral lobes and is completely edentate. The following is a subspecies of the well known *lithophilus:*

Brachylobus lithophilus ssp. **indigaceus** nov.—Body nearly as in *lithophilus* in form, size and sculpture, but not quite so stout and not

green but dark violet-blue throughout above, more obscure on the elytra; head rather smaller and with somewhat less prominent eyes; prothorax similar throughout but not quite so short or transverse; elytra similar but slightly less obtusely rounded at tip and with the striæ sensibly finer and much less strongly punctate, the intervals flat, not quite so densely punctate; punctures of the under surface scarcely so large but similarly disposed. Length (♂♀) 8.5–9.0 mm.; width 3.7–4.0 mm. Texas. Two examples.

My series of *lithophilus* is from New Jersey, Pennsylvania and Indiana; *indigaceus* is a more southern development of the stem form. *Caurinus* Horn, differs in the form of the prothorax.

Subfamily MICRATOPINI nov.

Middle coxal cavities entirely inclosed by the sterna, the suture very fine and close. Head with a single supra-orbital seta. Mesosternal epimera very narrow, indistinct; elytra covering the abdomen. Mandibles without an external seta. Posterior coxæ contiguous. Elytral margin continuous, without an internal plica. Last joint of the palpi minute, slender, oblique and inserted within a cavity at the tip of the penultimate. Body minute; integuments thin; facies nearly as in the Lebiinæ.

Following the order of characters now usually admitted in the classification of the Carabidæ, the very small species serving as the type of the new subfamily here proposed, is, as may be surmised, extremely isolated, for, with palpi nearly as in the Bembidiinæ and habitus of the body nearly as in the Lebiinæ, we have standing out very clearly at the smooth sides of the head, near the eye, only a single long seta, exactly as in all the other CARABIDÆ CONJUNCTÆ UNISETOSÆ.*

Micratopus n. gen.

Body very small and feebly convex, oblong-elongate, with thin integuments, rather small short head and large convex eyes. Mouth organs rather crowded. Mentum moderate, nearly flat, oval, slightly transverse, with a moderate and rather deep edentate sinus, the lobes sharply acuminate. Ligula very small, slender, the paraglossæ small, externally pointed at apex. Basal joint of the outer maxillary lobe stout, oval, the last joint short, narrower,

* In contradistinction to the first division of the Carabidæ, which may be known as CARABIDÆ DISJUNCTÆ.

affixed obliquely and gradually acuminate from base to apex. Labial palpi with the first joint minute, the second large, inflated, pubescent, the third joint minute, slender, projecting obliquely from the apex of the second. Maxillary palpi moderately long, coarsely pubescent throughout, the second joint moderately slender, the third of equal length, moderately stout, gradually narrowed basally, the fourth minute, aciculate, oblique, extending from a cavity in the tip of the third. Mandibles small, strongly arcuate, almost entirely hidden under the labrum in repose, bifid at tip. Labrum transverse, strongly convex, smooth, deeply sinuate medially. Epistoma flat, slightly wider than long, arcuate at tip, the suture fine, the frontal foveæ obsolete, represented by large and feeble impressions. Eyes notably large though only moderately prominent, the facets very distinct and convex. Antennæ long, very slender, filiform, pubescent throughout, the first joint subequal to the fourth and longer than either the second or third, which are nearly equal. Prothorax transversely and feebly obtrapezoidal, with a marginal seta before the middle and another at the hind angles. Scutellum ogival, entering well between the elytra, which are feebly striate, with obtuse apex, rounded sutural angles and a small subapical discal puncture at the third stria, the scutellar stria completely wanting but with the fovea very exceptional, being in the form of a small setigerous tubercle arising from the bottom of a rounded depression; sides with about four granuliferous setigerous foveæ basally and two or three apically, the latter bearing very long setæ. Prosternum unusually long before the coxæ, the process unmargined. Abdomen uniformly punctulate and minutely setigerous throughout, with a close-set pair of apical setæ at each side, apparently in both sexes. Sexual characters not apparent. Legs moderate, the femora strongly compressed, the tibiæ simple, with small slender spurs, the tarsi rather long, very slender throughout, the first joint of the posterior subequal in length to the entire remainder, the fifth a little longer than the two preceding combined; claws very small and slender.

Micratopus fusciceps n. sp.—Body very small in size, subparallel, moderately convex, shining, pale piceous-brown in color, rather paler beneath; the legs, antennæ and oral organs pale yellow-testaceous, the head not very deep black; integuments glabrous, excepting the abdomen; head three-fifths as wide as the prothorax, short, wider than long, smooth,

alutaceous and micro-reticulate; antennæ very slender and filiform, nearly three-fifths as long as the body; prothorax one-half wider than long, widest near apical third, where the sides are rather strongly rounded, thence moderately converging and more feebly arcuate to the basal angles, which are obtuse but distinct and subprominent; apex broadly sinuate, barely as wide as the base; surface smooth and polished, with strong abbreviated median stria and, at the basal margin near each side, a small feeble fovea; elytra nearly one-half longer than wide, parallel, with nearly straight sides and abruptly very obtuse apex, a third to nearly half wider than the prothorax, the striæ rather broadly impressed and not at all sharply defined; humeri right and narrowly rounded. Length 1.6–1.8 mm.; width 0.65–0.75 mm. Mississippi (Vicksburg).

A series of eight specimens were all that I could find among debris of fallen leaves in one of the narrow ravines south of the town.

III—A REVISION OF THE NEARCTIC HARPALINÆ.

It is hoped that in judging the following work, some allowance will be made for inherent difficulties, which are sufficiently well known to all those who have given the subfamily serious consideration. The apparent monotony and indefiniteness of the species, has served to deprive this section of the Carabidæ of much consideration, for there is not even the compensation, offered by the equally indefinite Chlæniid species, of having an attractive coloration. I have found the study of the Harpalids very interesting; they are by no means devoid of very marked structural diversity.

Subfamily HARPALINÆ.

It seems preferable to regard the major groups of Carabidæ, which were termed tribes by LeConte and Horn, as subfamilies, after the general European custom. The subfamilies can then be subdivided into tribes and these into groups. At any rate, I find this to be a more convenient system in the case of such an unwieldy complex as the Harpalinæ and the suggested method of subdivision seems also to express relative weights more consistently.

The classification of the Carabidæ now in vogue has been of very gradual evolution. The arbitrary arrangement of the earlier authors was measurably improved by the work of LeConte (Trans. Am. Phil. Soc., 1853), to such a degree in fact that Lacordaire inserted the arrangement of our able and honored predecessor in its entirety, as an appendix to the first volume of his still invaluable work on the genera of the Coleoptera. It is easy to trace some subsequent generalizations from this early work of LeConte. For example, further examination of the character relating to the mesosternal parapleura led to the detection of the fundamental structure now utilized for the division of our Carabidæ into two sections, as stated in the classification of LeConte and Horn, based upon the extension of the mesosternal epimera in the direction of the coxæ. The other two discoveries of the systematists just mentioned, that have given us our present arrangement—probably

the most natural that can be devised, relate to the existence of one or two supra-orbital setæ—extremely significant in the second subdivision of the family but of no value in the first—and the presence or absence of a postero-external elytral plica. These very important discoveries give us the means of resolving the family into several very clearly demarcated sections. I would suggest in this connection that the genus *Pseudomorpha* be separated from the Carabidæ to form a distinct family. It does not fall in line with the true Carabids very well either in structure or facies.

The Harpalinæ, as here considered, embrace all Carabids in which the mes-epimera fail to attain the coxæ and are narrow and parallel in form and also in which the head has but a single supra-orbital seta, the mandibles devoid of an external setigerous puncture, the posterior coxæ contiguous and the elytra without a postero-external plica. I have no means of verifying the opinion of Dr. Horn (Tr. Am. Ent. Soc., 1881, p. 175) that the singular African genus *Glyptus*, having no seta on the second labio-palpal joint, is a component of the subfamily, but am inclined to believe that the remarkable group of genera clustering about the European *Ditomus* should be excluded and form a subfamily by themselves, because of the strongly pedunculated body, long antennæ, occasional very striking modifications of the epistoma and mandibles, the peculiar coarse sculpture of the body and the marked departure in general habitus. Although most of the Ditomid genera are represented in the material at hand, I have therefore thought best not to include them within the scope of the subfamily as here considered. All of the European tribes of the subfamily, as thus restricted, occur in North America, but there are a few American tribes such as Cratocarini which do not occur in the old world.

In the table of tribes given below, it will be noted that the division heretofore proposed into three groups of genera, depending upon the structure of the male tarsi, has been abandoned and a succession of tribes defined upon more restricted sexual characters of the same kind, the two principal divisions, however, being based upon the setæ of the second labio-palpal joint, first suggested by Bates. The full importance of this character, which widely shifts the positions of several important genera such as *Polpochila* and *Agonoderus* into more congenial surroundings, escaped the attention

of Dr. Horn, by whom it appears to have been first brought to notice and was employed by that author merely in the separation of genera which seemed to be otherwise closely allied.

In the Harpalinæ there are numerous confusing parallelisms of structure, appearing in genera evidently widely separated in the present stage of evolution and probably reversional in nature, or indicative of like conditions of environment during the progress of evolutionary changes, such for instance as the occurrence of series of setigerous substrial punctures in such widely separated types as *Stenomorphus*, *Selenophorus* and *Philodes*, or the occurrence of the trifid anterior tibial spur in various not closely related genera within the tribe Anisodactylini, also occurring in the Amarid genus *Triæna* and so of no special significance in the estimation of generic relationship. Again, the presence of the enlarged basal joint of the anterior tarsi, especially of the female, characterizing the highly specialized genera *Stenomorphus* and *Gynandropus*, as well as *Gynandrotarsus harpaloides* of the Anisodactylini, and, finally, the occurrence of the rare seta at the hind angles of the prothorax in the indubitable Anisodactylid *Diachromus* and in *Trichocellus* of the Acupalpini. *Dicheirotrichus* is somewhat intermediate between these two genera, tending to unite the two divisions based upon the labial palpi and, as significant in this respect, there seem to be only three long anterior setæ on the second labio-palpal joint; the male tarsi, also, are not so purely Anisodactylid as in *Diachromus*, although the rather even distribution of the long hairs of the soles would seem to betoken somewhat more of an Anisodactylid than Acupalpid affinity, the general habitus of the body, however, being evidently more nearly that of the Acupalpini, to which tribe it is here attached.

The various tribes of the Harpalinæ, so far as represented by material accessible to me, may be defined as follows. The exotic groups, whether tribes or genera, in this and all subsequent tabular statements, are indicated by a prefixed asterisk as usual:

Second joint of the labial palpi plurisetose in front.....2
Second joint bisetose in front.....6
2—Middle tarsi (♂) not modified in vestiture beneath and undilated, the anterior sometimes so modified, however, as in *Geopinus;* abdomen generally with accessory setæ as in a large division of *Harpalus;* basal angles of the prothorax generally acutely rectangular or acutely subeverted, the prosternum short.....DAPTINI

Middle tarsi (♂) biseriately squamulose beneath.....3
Middle tarsi (♂) with dense uniform pads of squamiform pubescence beneath.....5
3—Elytra without series of substrial setigerous punctures, generally with a single puncture at or near the second stria on the third interval; prosternum normally short before the coxæ.....HARPALINI
Elytra with series of substrial punctures.....4
4—Prosternum normally short before the coxæ; elytral series always three in number on each.....SELENOPHORINI
Prosternum greatly elongated before the coxæ; basal joint of the anterior tarsi unusually developed, especially in the female as in *Gynandropus* of the Selenophorini and as reappearing in some of the Anisodactylini, such as *Triplectrus* (*Gynandrotarsus*); series of elytral punctures usually two in number.....STENOMORPHINI
5—Anterior and middle tarsi (♂) always dilated; body more *Harpalus*-like in facies than in either of the two preceding tribes. ANISODACTYLINI
6—Frontal impressions isolated or continued obliquely backward in a more or less fine canaliculation to the middle of the eyes; tarsi variously modified sexually; body always small to very small in size. ACUPALPINI
Frontal impressions continued obliquely backward to the occiput or posterior limit of the eyes; tarsi not or but very slightly modified sexually; body rather large in size to moderately small..CRATOCARINI

It seems necessary to use the name *Cratocara* of LeConte, for what is now known in the lists as *Polpochila* Sol., for, on reading the diagnosis of the latter genus, which is probably confined to the west coast of South America, I fail to perceive any close relationship with the so-called *Polpochila capitata* Chd. The description of *Polpochila*, as given by Lacordaire, is as follows:

Mentum transverse, narrowly and deeply emarginate and with a median tooth which is triangular and simple, its lateral lobes rounded externally, obtuse at tip and having a small tooth on the inner side. Ligula free, very prominent, rather broad, scarcely notched at tip, the paraglossæ large, spatuliform and internally recurved. Last joint of the palpi oblong-oval, equal to the preceding. Labrum transverse, angularly notched. Head short. Antennæ short, gradually increasing in thickness, the joints 3–6 conical, equal, 7–10 larger and shorter than the preceding, suboval and truncate at base and apex. Prothorax transverse, scarcely narrowed behind, almost straight at the sides, transversely truncate at base and separated from the elytra by a distinct interval. Elytra parallel, rounded at apex. Legs short, the anterior stouter, with the tibiæ sensibly triangular, the four posterior tibiæ spinose. Tarsi filiform, the four basal joints of the anterior short, strongly triangular, with the first two a little longer than the others.

Solier assigns to this genus only a very small insect (*P. parallela*),

3 mm. in length, of a rather brilliant black color, native to the southern provinces of Chile and of which he had only seen a single example of undetermined sex. It was placed among the Feroniids by Lacordaire. In view of the size of the body, the singular structure of the antennæ and the extreme southern and isolated habitat, I think there can be but little doubt that we have been in error in assigning to *Polpochila* our large *Melanotus erro* Lec. (*capitata* Chd.), subsequently given the generic name *Cratocara* by LeConte (Sm. Misc. Coll. 140, p. 11, 1866) because of the previous use of *Melanotus*. There can be no question concerning the close relationship of *Pogonodaptus* Horn, with *Cratocara*, as stated by Bates. It has no affinity whatever with *Daptus*.

Tribe DAPTINI.

The genera of this tribe, which abound and are greatly diversified in America, but represented in the palæarctic fauna by the single genus *Daptus*, may be distinguished among themselves as follows:

Tarsi thick, the posterior rapidly tapering from base to apex, the anterior clothed beneath in the male with confused erect squamiform hairs; anterior tibiæ with a ciliate terminal plate in both sexes, the tibial surfaces not peculiarly modified..... **Geopinus**

Tarsi slender, the posterior filiform, the anterior apparently never hairy beneath, the anterior tibiæ without lamelliform extension, though peculiarly modified apically in *Nothopus*.....2

2—Anterior and middle tibiæ thickened, densely, coarsely punctured and spinulo-setulose over their posterior and anterior surfaces respectively; body subpedunculate..... ***Daptus**

Anterior and middle tibiæ not specially modified on their lateral surfaces; body not pedunculated.....3

3—Hind angles of the prothorax right or acute, frequently everted; elytra oblong, the humeri distinct, the hind wings always well developed.....4

Hind angles very obtuse but never at all broadly rounded; elytra oval, with rounding humeri, the hind wings apparently vestigial; mentum edentate.....8

4—Mentum edentate; ligula small and slender, much shorter than the large and usually thickened ciliate paraglossæ.....5

Mentum with a long and very acute tooth; ligula rather broader, not evidently expanded at tip, exactly equal in length to the paraglossæ.7

5—Body somewhat as in *Daptus*, narrower than in any of the following genera, the head large, the prothorax cordate, the sides sinuate before the right and very sharp basal angles; head without projections above the antennæ, which are slender and filiform; elytra rather short, wider than the prothorax, the base much wider than

the thoracic base, simply striate, the first stria bifurcating at base because of union with the scutellar stria, the second with a single setigerous puncture, which is unusually posterior and near the summit of the declivity, the apex obliquely ogival, the sinus broad and extremely feeble; legs moderate, the tibiæ and tarsi slender, the basal joint of the posterior tarsi not as long as the next two.

***Cratognathus**

Body stout, the elytral and thoracic bases not differing much in width; elytra with numerous punctures bearing long setæ.....6

6—Anterior tibiæ rather slender, of the usual form, not modified externally or at apex; body nearly as in *Cratacanthus* in outline.

Piosoma

Anterior tibiæ with an obtuse prominence on the external edge, the outer apical angle greatly produced in an obtusely pointed and slightly curved process; body larger, broader and still more compact.

Nothopus

7—Body oblong, stout, very convex, shining, the elytra deeply striate but without discal punctures of any kind, even the single puncture of *Cratognathus* and many Harpali being absent, the foveæ of the marginal series irregular, the series uninterrupted medially; legs moderate, without special modification.....**Cratacanthus**

8—Body elongate-suboval, convex, the legs rather slender, the anterior tibiæ unmodified sexually, slender, with a small slender terminal spur; elytra with serial punctures on the alternate intervals toward apex only.....**Glanodes**

The above outline of *Cratognathus* Dej., is drawn from a pair that I took at Wellington, near Cape Town, South Africa; the species is probably *capensis* Cast. As stated by Lacordaire, Dejean was mistaken in assuming that his type species was from South America.

Geopinus Lec.

The body is large in size, very stout and convex and of a peculiar pale tawny yellow color throughout, with the exception of some indefinite shading occasionally on the pronotum and elytra. The mentum is devoid of any trace of tooth, as in all the genera of the tribe excepting *Cratacanthus*, the head large, with relatively rather small but prominent eyes, the palpi moderately slender, the second of the labial with numerous bristling setæ, the last joint of both with but few short erect setæ, the ligula long, gradually feebly dilated apically, free and with two very long setæ at the truncate apex, the paraglossæ flat, truncate, not very wide and shorter than the ligula. The antennæ are relatively very short and rather thick, though filiform and the labrum is shallowly but acutely

emarginate medially at tip, the frontal impressions rather large, deeply impressed and isolated. The prothorax is nearly as in *Daptus* and *Cratacanthus* and the elytra are of the usual Harpalid type; there is a single puncture on the second stria behind the middle. The legs are rather short and notably stout, the femora all rather distinctly swollen, the tibiæ gradually dilated distally, the anterior serrulate externally, with a small emargination just before a singular oblique concave, lamelliform apical extension, the plate densely fimbriate with short spinuliform setæ; the terminal spur of the anterior is single and feebly swollen at each side near the base, those of the intermediate and posterior two in number, long and very slender on the former and very stout on the latter. The anterior tarsi of the male are rather short and thick, with moderately dilated joints, the basal nearly as long as the next two but not inflated, spinose beneath and devoid of squamæ; joints 2–4 transverse and densely clothed with confused squamules, the second in apical half only, the intermediate much longer and more filiform than the anterior or posterior, both the latter and intermediate completely devoid of squamules. The tarsi of the female are nearly as in the male but rather less dilated throughout and especially the anterior, all devoid of squamules. The tarsal claws are long, divaricate, extremely slender and evenly arcuate. The single species may be known as follows:

Stout, oblong-oval, very convex, not very shining, pale tawny-yellow in color, the elytra each broadly and very indefinitely clouded with darker brown discally, the pronotum clouded at apex, except at the sides, and thence broadly posteriorly to behind the middle; head (♂) three-fourths as wide as the prothorax or four-fifths (♀), the prothorax relatively smaller in the latter sex; antennæ extending barely to the middle of the prothorax, which is nearly one-half wider than long, the sides rounded anteriorly, feebly converging and slightly sinuate thence to the hind angles, which are but little more than right and slightly blunt at tip, the lateral gutter rather broad throughout; base transverse, strongly margined, the apex sinuato-truncate; surface deplanate from the large but vague foveæ to the hind angles and impunctate; elytra much wider than the prothorax, oblong-oval, with arcuate sides and obtusely rounded apex, two-fifths longer than wide, the sides becoming straight and oblique near the base; sinus narrow but rather deep; surface coarsely, deeply striate, the scutellar stria deep and long, uniting with the first, which becomes therefore symmetrically bifurcate at base, the two lateral striæ on the flanks abruptly very fine and feeble, the marginal foveæ

rather small and feeble, the series narrowly interrupted. Length (♂ ♀) 13.0–14.0 mm.; width 5.9–6.5 mm. New York (Long Island). [*Daptus incrassatus* Dej.]..... **incrassatus** Dej.

A—Similar to the preceding but a little larger, evidently more elongate and devoid of darker shading on the pronotum and elytra, excepting a darker medial apical margin on the former; head relatively a little smaller; prothorax nearly similar; elytra with the humeral angles still more broadly rounded; hind tibiæ of the male more elongate and less dilated at apex, the hind tarsi a little longer and not quite so inflated. Length (♂ ♀) 14.4–16.4 mm.; width 6.0–6.8 mm. Iowa (Keokuk). Five examples... **fluviaticus** n. subsp.

This forms another instance of anciently identical stocks gradually becoming different on opposite slopes of the Appalachian system, as shown by *Tetraopes tetrophthalmus* and *iowensis* (Mem. Col. IV, p. 386) and also perhaps by *Cicindela levettei*, when compared with *sexguttata*, but in the latter case the differences have become specific, as shown by the very much longer tibiæ in *levettei* as well as the constantly different coloration.

Daptus Fisch.

This genus includes but few isolated species, only occurring, so far as known, in the palæarctic fauna, where however they are widely diffused. The type of the genus, *Daptus vittatus* Fisch., with several varieties, and *pictus*, of the same author, are the only species now known. The body is rather small in size, oblong-elongate and parallel in form, moderately convex and shining, the elytra pale in color as in *Geopinus* and with nearly corresponding darker discal parts. The head is large, the eyes moderate and prominent, the mandibles well developed, arcuate at tip, the labrum feebly sinuate and the frontal impressions very shallow and diffuse; there is a pointed projection above the point of antennal insertion and the antennæ are short and rather stout but filiform, with the third joint as long as the next two combined. The mentum is not very large, unusually short, the sinus arcuate at the bottom but not dentate, the ligula rather widely expanded at tip and longer than the paraglossæ, which are small in size; the palpi are rather slender; the prothorax is transverse, cordate, about as wide as the elytra, with the converging sides sinuate before the basal angles, which are right, not rounded and even slightly reflexed; the elytra are parallel, abruptly very obtuse at apex, the sinus

obsolete, the striæ rather deep, feeble laterally, the scutellar strong, tending to unite with the first, which is deflexed basally; the striæ are obsoletely and finely punctulate and, in apical half near the second, there are about four and basal half of the third two, rather large impressed setigerous punctures; the marginal foveæ are very small and are present only near base and apex. The legs are thick and rather short, the femora not notably stout, the anterior and middle tibiæ somewhat inflated, the former on the posterior face and the latter on the anterior face, covered thickly with short stiff spinules arising from coarse deep punctures; all the tarsi are spinose beneath in both sexes, the anterior not dilated in the male though rather thick short and tapering, the others slender and filiform, the basal joint of the posterior not as long as the next two. The prosternal process is unusually narrow and constricted between the coxæ.

Piosoma Lec.

The body here is very much as in *Cratacanthus* in external form but somewhat stouter, strongly convex, shining, the head moderately large, with rather prominent eyes and slender filiform compressed antennæ, the third joint but little longer than the second or fourth, the upper surface with fine punctures throughout and a transverse interrupted series of coarse punctures on a line with the posterior limit of the eyes; the frontal foveæ are small and punctiform; the prothorax is transverse, equal in width to the elytra or nearly so, the sides feebly converging and broadly sinuate posteriorly to the right and sharply marked angles, the surface with numerous very coarse punctures toward base and sides, the base transverse and margined throughout, the apex feebly sinuate and with broadly rounded angles. The elytra are notably short, parallel, very obtusely rounded at apex, the sinus completely obsolete. The legs are moderate in length, not very thick, the hind tarsi filiform, with the basal joint but little longer than the second. All the coarse punctures of the upper surface bear very long bristling setæ, those at the sides of the prothorax forming a conspicuous loose fringe. There seem to be three species as follows:

Elytra with all the intervals uniseriately punctate.....2
Elytra with only the alternate intervals so punctured.....3

2—Body deep black in color, the under surface and legs feebly rufescent; antennæ and oral organs testaceous; head fully two-thirds as wide as the prothorax, the latter more than one-half wider than long, fully as wide as the elytra, the sides rounded anteriorly, moderately converging and broadly sinuate basally; surface steeply declivous at the sides to the distinct marginal gutter, which is rufescent from diaphaneity, slightly explanate postero-laterally, the foveæ large, shallow and very vague; basal parts with some fine faint punctulation and rugosity in addition to the coarse punctures; elytra oblong, nearly a third longer than wide, parallel, very broadly rounded at apex and with dentiform humeral angles, the striæ very coarse and deep, the scutellar finer, long, generally joining the first; intervals feebly convex, each with a regular and widely spaced medial series of very coarse setigerous punctures; marginal interval with scattered smaller punctures. Length (♂ ♀) 7.8–11.7 mm.; width 3.4–4.6 mm. Colorado, New Mexico and Arizona. Abundant.....**setosa** Lec.

Body smaller and very much shorter, piceous in color, shining; head and antennæ nearly as in the preceding; prothorax relatively smaller, not more than four-fifths as wide as the elytra, nearly similar in outline but with smoother surface between the very coarse punctures; elytra very much shorter, not longer than wide, the sides more abruptly oblique and straight near the base, the sculpture and setæ similar, except that the punctures of the marginal interval are in a single series; legs pale flavo-testaceous. Length 8.0 mm.; width 3.7 mm. A single example of undetermined sex and without label in the Levette collection.....**brevipennis** n. sp.

3—Piceous in color, shining; prothorax slightly wider than the head, almost one-half shorter than wide, subcordate, posteriorly narrowed, the sides rounded, setigerous, subsinuate posteriorly, the hind angles right, foveate laterally at base; elytra convex, the striæ deep, the intervals 1–3–5–7–9 with sparse setigerous punctures, arranged almost uniseriately; antennæ, labrum, palpi and legs rufo-testaceous. Length 10.5 mm. Arkansas. [*Cratognathus alternatus* Lec.].
alternata Lec.

The description of *alternata*, which I have not seen, is taken from the original; it seems to be extremely rare. There may be some doubt as to the correctness of the generic assignment of this species.

Nothopus Lec.

Notwithstanding the evidently different facies of this genus when compared with the preceding, there is a very close bond of affinity and they form a notably isolated group of the Harpalinæ, having a massive compact body and very coarse scattered setigerous punctuation of the upper surface. The special characters relating to the anterior tibiæ constitute the only important structural difference

to be noted so far as observed. In *Nothopus* the serial punctures of the elytra are relatively much smaller than in *Piosoma* and they are less numerous, but the setæ borne by them are similarly long and bristling; the punctures of the pronotum are fine. There are undoubtedly a number of distinct species, those represented in my cabinet being as follows:

Head notably large in both sexes, distinctly more than half as wide as the prothorax. Body large in size, very stout, oblong-oval, convex, shining, black to rufo-piceous, the legs, under surface, antennæ and palpi paler and obscure rufous, the labrum nearly black; head scarcely at all punctulate, the impressions long, parallel, broadly and feebly impressed, uneven and rugulose, the surface between them also rugulose medially; labrum large, feebly sinuate medially, with broadly rounded angles; eyes very moderate; antennæ rather slender, compressed, extending barely to the middle of the prothorax, the third joint but little longer than the second or fourth; prothorax nearly twice as wide as long, parallel, almost equal in width to the elytra and compactly joined throughout the basal width, the humeri only minutely exposed, the sides straight, slightly rounding anteriorly, the basal angles not rounded and feebly subeverted; base broadly, feebly sinuate in median half, margined throughout, the apex feebly bisinuato-truncate, the fine margin broadly interrupted medially; surface steeply declivous at the sides to the conspicuous and coarse marginal gutter, which expands basally, the edge strongly reflexed from apex to base; toward base and apex throughout the width with rather sparse, fine and very distinct punctures; median stria bi-abbreviated but rather deeply impressed and distinct; foveæ obsolescent; elytra a third longer than wide, two and two-thirds times as long as the prothorax, subparallel, slightly swollen at the sides near the base, broadly and obtusely ogival at apex, the sinus obsolete; basal margin straight, curving forward slightly to the obtusely dentate humeri; striæ fine, feebly (♂) or more strongly (♀) impressed, the intervals flat to feebly convex, barely more convex behind, the scutellar stria long, the first symmetrically bifurcating basally, as in all the subsequent species; punctures of intervals 3–5–7 very moderate, inconstant, widely and unevenly spaced; intervals 4–6–8 also serially punctate toward apex as a rule; marginal series uninterrupted and irregular; legs moderately long and stout, the first four joints of the hind tarsi decreasing slowly and evenly in length, the claws very slender and strongly arcuate. Length (♂ ♀) 12.0–15.8 mm.; width 6.4–7.7 mm. Iowa (Keokuk) and Lake Superior. Six examples..... **valens** n. sp.

Head distinctly smaller, not more than half as wide as the prothorax in either sex and similarly not differing much sexually..... 2

2—Elytra barely perceptibly longer than wide, the punctures of the alternate intervals larger, more impressed, more numerous and less regularly serial in arrangement than in any other species. Head nearly as in *valens*, the labrum still more feebly sinuate, obscure

rufous, always shaded with piceous-black medially, the frontal impressions shorter, feeble; prothorax nearly similar, except that the coarse lateral gutter expands much less basally; elytra similar in structure but barely a fifth longer than wide and more abruptly and broadly obtuse at apex, differing in the very strongly impressed striæ and notably convex intervals, the large impressed punctures very much more numerous, generally confused over the entire width of the third interval posteriorly, the punctures of the even intervals few in number and often wanting; tarsi of the female a little more slender than in the male as usual. Length (♂♀) 11.8–12.8 mm.; width 5.5–6.0 mm. Colorado. Three examples.....**obtusus** n. sp.

Elytra distinctly elongate, the serial punctures fewer in number, smaller, more regular and less impressed.....3

3—Body larger in size and broader though not so broad as in *valens*, generally rufo-piceous in color, the elytra more gradually rounded and obtuse at apex than in *obtusus;* head nearly as in *valens* but much smaller, the labrum generally blackish; prothorax nearly as in *obtusus;* elytra a third longer than wide, the striæ fine and usually feebly impressed, the punctures of the alternate intervals small, rather regularly serial but very widely and unevenly spaced. Length (♂♀) 11.0–14.5 mm.; width 5.0–6.7 mm. Texas (El Paso) and Colorado. Four examples. [*Euryderus zabroides* Lec.].

zabroides Lec.

A—Similar to *zabroides* but more broadly oblong and deep black in color, the striæ similar, the punctures of the alternate intervals very few in number, on the third three to five and situated only in apical third, on the fifth three or four in apical third only, although there is a single isolated puncture on the left elytron at basal fourth in the type, the seventh with three or four confined to apical half; under surface and legs black or piceous-black. Length (♂) 13.0 mm.; width 6.25 mm. Texas (El Paso).

privatus n. subsp.

Body smaller and especially narrower than in any other species and with slightly shorter though otherwise similar tarsi, deep black in color, the under surface and legs rufo-piceous, the antennæ pale, the labrum piceo-castaneous; head as in the other species but with the frontal impressions small, punctiform, at the anterior end of very feeble vague impressions of the surface; prothorax as in *obtusus* but with the scattered punctures toward base and apex finer and less numerous, sometimes wholly wanting apically, the series of about three coarse setigerous lateral foveæ in the marginal depression more distinct than in the other species, owing to the subobsolete ground sculpture; elytra two-fifths longer than wide, not quite three times as long as the prothorax, the striæ fine, rather feebly impressed, with nearly flat intervals, the punctures of 3–5–7 numerous, twelve to fifteen in number, extending from apex to base and not evenly serial but notably irregular, the even intervals also with a few punctures apically. Length (♂♀) 11.5–11.8 mm.; width 5.0–5.2 mm. Arizona.....**arizonicus** n. sp.

It is often difficult to distinguish the male from the female, but in the latter the hind tarsi seem to be a little more slender, with the fourth joint more elongate than in the male. I should have been disposed to consider *valens* as identical with the *Amara? grossa* of Say, the size and general characters being similar, were it not for some irreconcilable statements in the description of that species, which was founded upon a single headless individual. Say states that the dorsal line of the prothorax is almost obsolete in *grossa*, the basal margin "somewhat rough" and "elytra with a sinus near the tip." The medial pronotal stria is rather deeply impressed and the surface basally and apically strewn with very distinct and clearly isolated punctures in all the known species, but the language in reference to the elytral sinus could not by any seeming possibility apply to any species described above, the sinus being obsolete and traceable as a feebly straightened part of the edge only under very careful observation. It may of course be possible that the language of Say is inaccurate and misleading and that *valens* is really *Amara grossa* Say, as thought by Blatchley, but I do not feel warranted in making any such definite identification under the circumstances.

Cratacanthus Dej.

It is rather remarkable to find in a group characterized generally by a completely edentate mentum, a genus in which the mentum is not only dentate but to such an extreme degree as in *Cratacanthus*, the tooth being very acute and extending to the transverse line limiting the mentum anteriorly. The body is nearly as in *Cratognathus* in its general form, shining surface and freedom from sculpture, but here it is generally stouter in outline. The head is rather large, sometimes very large, the eyes moderate, the antennæ rather stout but less so than in *Daptus* and the third joint is only a little longer than the second or fourth, the frontal impressions small and punctiform. The ligula is rather narrow, parallel, not enlarged at apex, free and exactly equal in length to the paraglossæ, which are very thick, pale, with triangular cross-section apically and obliquely ciliate externally at tip. The prosternal process is unusually broad and but very little constricted by the coxæ. The prothorax is cordiform, transverse, with sharply marked right and sometimes acute and slightly everted basal angles, the base strongly

margined throughout; the marginal gutter at the sides is very deep and equal from apex to base, not expanding or becoming shallower toward base, a very peculiar character of the genus; the elytra are short, oblong-oval, not or but little wider than the prothorax, rather coarsely and very deeply striate, with strong scutellar stria, which is free and not united with the first stria and the surface is completely devoid even of the single posterior puncture of *Cratognathus;* the apical sinus, so universal in most of the Harpalinæ, is completely obsolete, not even a vestige remaining; the marginal line of foveæ is irregular and uninterrupted. The legs are rather short, the femora slightly swollen, the tibiæ slender and the tarsi rather short, filiform and virtually similar in the sexes, the basal joint of the posterior a little longer than the second. The claws are only moderate in length, arcuate and slender, though gradually somewhat thickened basally. The male has the elytra but little longer than the head and prothorax combined in *dubius*, but in the female they are distinctly less abbreviated.

The species are closely allied among themselves and subject to a good deal of variation in breadth of the body and relative width of the anterior parts and elytra, but at the same time four seem to be differentiable in the material at hand; these are as follows:

Head moderate in size and in both sexes much narrower than the prothorax. 2

Head very large, only a little narrower than the prothorax. 4

2—Elytra but little longer than the head and prothorax combined, especially in the male. Body oblong, very convex, strongly shining, black to piceo-rufous in color, always dark red-brown beneath, the legs, antennæ and mouth-parts rufous; antennæ not extending to the middle of the prothorax, rather stout, compressed, the joints rapidly narrowed toward their bases; prothorax one-half wider than long, sinuously narrowed basally, the base broadly and feebly sinuate except at the sides, the apex subtruncate, finely margined near the sides; surface smooth, with fine distinct biabbreviated median line and completely obsolete transverse impressions, not at all flattened postero-externally and without distinct foveæ, but densely and rather coarsely punctured in small basal patches corresponding to the foveæ; elytra a fourth (♂) to two-fifths (♀) longer than wide, very broadly and obtusely rounded at apex, the smooth and polished intervals distinctly convex. Length (♂♀) 7.5–9.8 mm.; width 2.8–4.0 mm. New Jersey to Arizona. Twenty-one examples. [*C. americanus* Dej., *bisectus* Csy. (♂) and *litoreus* Csy. (♀)]. . **dubius** Beauv.

Elytra much longer than the head and prothorax, apparently in both sexes. 3

3—Body narrower and more elongate than in *dubius* but with the elytra similarly very obtusely rounded at apex; head similar but with the antennæ more slender; prothorax nearly similar and about as wide as the elytra, though with the base not broadly sinuate medially but transverse and perfectly rectilinear throughout, the coarsely punctate basal foveæ more pronounced; elytra nearly one-half longer than wide, the striæ less deeply impressed and sometimes closely and obscurely punctulate, the intervals flatter; apex in posterior third circularly rounded; abdomen partially punctured and setulose as usual. Length (♂ ♀) 7.0–10.7 mm.; width 3.0–4.0 mm. Iowa to Texas and Arizona. Eleven examples.....**texanus** Csy.

Body rather stout and more oval, strongly convex, larger in size, deep shining black, the under surface, legs and cephalic parts colored as in *dubius;* head nearly as in the preceding, the antennæ stouter; prothorax nearly similar in form but distinctly narrower than the elytra, the base transverse and rectilinear, feebly sinuate at lateral fourth and thence transverse and straight to the angles, which are right and not at all everted; surface almost as in the preceding; elytra more oval, widest near the middle, the apex more gradually ogival from slightly behind the middle; sides broadly arcuate; striæ rather coarse, abrupt, the intervals but feebly convex. Length (♂ ♀ ?) 9.9–11.0 mm.; width 4.0–4.4 mm. Southern Atlantic seaboard.....**subovalis** n. sp.

4—Form very stout, subparallel, convex, moderately shining, deep black above, piceo-rufous beneath, the legs and antennæ paler; head fully four-fifths as wide as the prothorax, the eyes a little larger than usual, the antennæ stout; prothorax somewhat more than one-half wider than long, throughout nearly as in *dubius,* the base broadly, feebly sinuate, becoming somewhat posteriorly oblique laterally; elytra oblong, scarcely wider than the prothorax and only one-fourth longer than wide, parallel and straight at the sides, the apex rather abruptly and very broadly arcuate; striæ coarse and deep, rather abrupt, the intervals virtually flat. Length (♂) 10.0 mm.; width 4.4 mm. Missouri (St. Louis).....**cephalotes** n. sp.

The example of *dubius* having the greatest width in the measurements given above, is an exceptionally broad male from El Paso, Texas; the next broadest examples of a large series measure barely 3.8 mm. in width.

The names *bisectus* and *litoreus* were applied by the writer (Cont. Descr. and Syst. Col. N. A., Pt. II, p. 74) to very small and odd looking examples of the two sexes; not having others to corroborate them, even as subspecies, the best course is to suppress them as slight abnormalities.

Glanodes n. gen.

The type of this genus is *Harpalus obliquus* Horn. Dr. Horn does not mention any dilation of the anterior male tarsi and representatives of the three species in my collection betray no indication of it, although one of the types seems to be a male. The body is completely isolated in habitus among our Harpalinæ, but the genus would seem to be better placed at the end of the Daptini than anywhere else; the only other course would be to propose for it a distinct tribe. The mentum is completely edentate, the ligula slender, not dilated at the bisetose apex and much shorter than the paraglossæ, which are concave, only moderately broad and thickened and obliquely truncate at apex; they have two or three short external setæ. The palpi are all very slender, the second joint of the labial equal in length to the third and with about four short erect setæ. The eyes and other dorsal cephalic characters are exactly as in *Cratacanthus*, but the antennæ are less abbreviated. The prothorax is distinctly wider than the head, with strongly oblique straight sides posteriorly, the surface smooth and convex, steeply and evenly declivous at the sides to the very finely reflexed margin throughout, the foveæ usually deep; the base is margined. The elytra are oval, finely striate, with or without a dorsal setigerous puncture, the punctures and foveæ of the marginal interval small, diffused and uninterrupted; the scutellar stria is fine, rather short, free and oblique. The intercoxal process of the prosternum is broad, but feebly constricted by the coxæ and as usual plurisetose. The hind tarsi are slender, with the first four joints decreasing slowly and evenly in length, the first much shorter than the fifth; the claws are arcuate, extremely slender and moderate in length. We appear to have four species as follows:

Elytra with a small setigerous puncture, externally adjoining the second stria near apical third.....2

Elytra without trace of a dorsal setigerous puncture near the stria....3

2—Legs and antennæ ferruginous. Pitchy black, shining; head moderate, sparsely punctate; prothorax cordate, one-third wider than long, the sides in front arcuate, posteriorly oblique, the margin very narrow; base narrower than the apex; hind angles not prominent, very obtuse, the point of the angle blunt; basal angular impressions moderately deep, somewhat triangular and punctured, the median line distinctly impressed, the surface moderately convex shining, with a few punctures along the basal margin; elytra oval, the humeri

obtusely rounded, the apex feebly sinuate; surface striate, the striæ impunctate, the intervals slightly convex, with a single dorsal puncture, which is at posterior third on the third interval near the second stria; under surface pitchy black, smooth, the abdomen with a few punctures near the base and at the sides bearing accessory setæ; mentum without tooth. Length 10.0 mm. New Mexico (Fort Bayard). [*Harpalus obliquus* Horn]..... **obliquus** Horn

Legs piceous-black, the antennæ obscure rufous. Black and shining above, piceous-black beneath, the abdomen slightly rufescent; head with small impressed punctures loosely and evenly distributed over the entire surface, two-thirds as wide as the prothorax, the mandibles stout, strigose, the eyes moderate, the antennæ not extending to the thoracic base; prothorax one-half wider than long, the sides rounded anteriorly, very oblique and straight thence to the base, which is broadly and very feebly sinuate throughout and barely more than two-thirds the maximum width, the apex sinuato-truncate, with the angles rounded; basal angles very obtuse, blunt though barely at all rounded; surface convex, smooth, very shining, with some very fine sparse punctulation basally, the foveæ deep, a sixth the total length, linear, punctate and separated from the sides by a convex surface; elytra oval, subalutaceous, one-half longer than wide, a third wider than the prothorax and less than three times as long, very obtuse at apex, the sides rounded, the sinus broad and barely traceable, obsolete; striæ fine, the scutellar oblique, the intervals flat, the dorsal puncture small, at posterior third; intervals 3–5–7 with two to four small punctures forming even medial series near the apex; lateral foveæ very small, widely separated throughout, with a few smaller and sparser punctures intermingled; abdomen punctulate basally and with numerous accessory setæ; first three joints of the hind tarsi subequal and much shorter than the fifth. Length (♀) 10.5 mm.; width 3.8 mm. Arizona (Peach Spring),—Wickham.

puncticeps n. sp.

3—Form nearly as in the preceding, the anterior parts much smaller when compared with the elytra than in the next species; deep black, shining, the elytra less alutaceous than in *puncticeps*, the under surface and legs piceo-rufous, the antennæ and mouth parts ferruginous; head not quite so large and with somewhat smaller eyes than in the preceding, the surface with fine sparse punctures, evenly disposed throughout but much more obsolete than in *puncticeps;* prothorax similar in form but with the base transverse and rectilinear throughout and with the very obtuse angles sharply marked and not blunt at tip, though not at all prominent; surface nearly similar, the side margin a little less fine and similarly disappearing—with the exception of the marginal bead—near the hind angles, the median stria also strong, not attaining base or apex, the scattered basal punctures extremely minute, obsolescent medially, the foveæ sublinear but broadly and very feebly impressed and subobsolete, finely punctulate; elytra oblong-oval, the humeri rather less broadly rounded than in the preceding, the apical sinus rather more obvious, the striæ fine but more impressed, the scutellar still shorter and

finer, oblique, the intervals feebly convex, the punctures of 3–5–7 only two to three in number and still more apical, the lateral foveæ and scattered punctures stronger; tarsi nearly similar but a little shorter. Length (♀) 9.0 mm.; width 3.7 mm. Utah (Virgin River).

corpulentus n. sp.

Form more parallel, probably by reason of sexuality to some extent, the anterior parts much larger when compared with the elytra than in the types of the three preceding, somewhat piceous black above, the under surface piceo-ferruginous, the legs paler and more yellow, the antennæ and mouth parts as usual; head nearly three-fourths as wide as the prothorax, the punctulation similar but still finer, sparser and nearly obsolete, the antennæ about attaining the thoracic base; prothorax barely two-fifths wider than long, nearly similar in general form but with the transversely rectilinear base just visibly sinuate opposite each fovea and with the obtuse angles narrowly rounded; surface with a few longitudinal wrinkles anteriorly and medio-basally, the foveæ short, very deep, punctulate, broadening basally; all other punctures wanting; side margins very fine; elytra oval, rather strongly alutaceous, broadly rounding at the sides, the humeri very broadly rounded, the sinus obsolete, scarcely at all traceable, fully one-half longer than wide, not quite a fourth wider than the prothorax, the striæ fine, slightly impressed suturad; intervals flat, the punctures of 3–5–7 three or four in number and extending some distance from the apex as in *puncticeps*, the marginal punctures and foveæ small and sparse; hind tarsi with the first four joints decreasing uniformly and rather rapidly in length, the anterior much shorter than the others but slender, nude beneath. Length (♂) 9.0 mm.; width 3.4 mm. Arizona (near Benson),—Dunn.

regressus n. sp.

Either the figure of *obliquus* given by Horn is erroneous—as is probably true—or that species differs distinctly from any at hand also in the punctuation of the head, for, as drawn, the punctures are mainly limited to a triangular median part, instead of being evenly diffused throughout as in all the others. It is also probable that the author neglected to observe the punctures near the apices of intervals 3–5–7 on the elytra, which, without much doubt, are present in his type of *obliquus*. These punctures indicate some affinity with *Piosoma alternata*, as is also the case with *Cratognathus cordatus* Lec., of the Harpalini, referred below to a separate genus. These punctures also reappear in many Anisodactylids, forming thus another case of parallelism of development or reversion.

Tribe HARPALINI.

This tribe is the largest of the subfamily and probably the most difficult, so far as the delimitation of genera is concerned. It was

the opinion of Dr. Horn that the organs of the mouth were of less weight in the classification of the genera of Carabidæ than they had been held to have, and this is probably true generally, but in this particular tribe I find them to be decidedly useful; the dentition of the mentum however, here, as well as in the Anisodactylini, loses much of the value that it possesses elsewhere and more especially in the large tribe of very small species, known as the Acupalpini. In the subjoined table, many of the foreign genera are omitted because of lack of material, but so far as represented in my collection they may be arranged as follows:

Basal joint of the hind tarsi seldom much elongated, more or less evidently shorter than the next two combined; elytra never opalescent, though sometimes metallic.....2

Basal joint much elongated, equal to or exceeding the next two combined, the elytra always having strong prismatic iridescence as in many of the Selenophorini.....10

2—Paraglossæ diverging apically, more or less narrowly rounded at tip and much longer than the ligula.....3

Paraglossæ more rounded, generally broadly rounded and thickened at apex, more or less nearly equal in length to the ligula; alternate elytral intervals rarely with serial punctures at apex, the only instances observed being on 7 or 5 and 7 in certain *Acinopus* and *Artabas*...5

3—Elytra with serial punctures on intervals 3–5–7 toward apex, as in *Glanodes* of the preceding tribe; body *Cratacanthus*-like in habitus, the prothorax cordiform, with right and sharply marked basal angles. Sonoran regions.....**Opadius**

Elytra without trace of serial punctures on intervals 3–5–7.....4

4—Body *Cratacanthus*-like in habitus, compact, oblong, the hind angles of the prothorax sharply rectangular; integuments very pallid in coloration but thick and solid as in *Geopinus;* mentum tooth wanting or vestigial, the elytra without a dorsal setigerous puncture. Gulf regions.....**Pharalus**

Body with a somewhat *Acinopus*-like facies but very small in size, the basal thoracic angles broadly rounded; integuments dense, black as usual; second labio-palpal joint longer and relatively thinner than in any other genus of the tribe; head very large; mentum edentate. South Africa.....***Micracinopus**

5—Anterior and middle tarsi subequally dilated in both sexes but biseriately squamose beneath only in the male as usual; second joint of the labial palpi much longer than the third; mandibles stout and strigose; basal thoracic angles broadly rounded; head large; mentum edentate. Palæarctic regions.....6

Anterior and middle tarsi dilated much more strongly in the male, where they are biseriately squamose beneath.....7

6—Head rather long behind the eyes, subparallel and not constricted; body broad and of large size, the tarsi all very stout; marginal stria

of the elytra arcuate opposite the interval of interruption of the marginal line of foveæ. Palæarctic fauna.....*Osimus

Head much shorter and somewhat constricted behind the eyes; body narrower, more cylindric and smaller in size, the tarsi less stout; marginal stria and labial palpi nearly similar. Palæarctic fauna. *Acinopus

7—Pedestal of the mentum with a single long discal seta at each end..8

Pedestal of the mentum with two discal setæ in transverse line at each end.....9

8—Ligula not or but slightly dilated at tip; body very diversified in habitus, smooth to distinctly punctate in various parts, in one or both sexes, but never having the pronotum coarsely punctured throughout as in the *Dicheirus*-like *Ophonus;* mentum dentate to edentate; second labio-palpal joint a little longer than the third. Cosmopolitan.....**Harpalus**

Ligula strongly expanded at tip; upper surface strongly, closely and subevenly punctured throughout; mentum feebly toothed as a rule, the palpi nearly as in *Harpalus,* the body small in size. Palæarctic regions.....*Ophonus

9—Body smooth, with moderate head and completely edentate mentum, the palpi, ligula and paraglossæ as in *Harpalus;* prothorax cordiform as in *Cratognathus,* the sides sinuately converging basally; antennæ unusually slender and barely at all compressed. South Africa. *Raphalus

10—Elytra with a single subposterior dorsal puncture, always strongly opalescent; ligula as long as the paraglossæ or nearly so, rather wide, distinctly expanded at tip, the paraglossæ of peculiar form, narrowly prolonged externally at apex; labial palpi slender, gradually acuminate at tip, the second and third joints equal in length; mentum toothed. North America, excepting the Pacific regions..**Pteropalus**

The few exotic genera are introduced merely for comparison with our own and can be disposed of in few words at this time.

MICRACINOPUS n. gen.—The type of this genus is a very small species which I took at Wellington, near Cape Town; it may be described briefly as follows:

***Micracinopus politissimus** n. sp.—Narrowly oblong-suboval, convex, polished, black above and beneath, the elytra with just visible bluish lustre, the epipleura piceous; legs, palpi and antennæ pale testaceous-yellow; head but very little narrower than the prothorax, the eyes rather large but only moderately convex, the mandibles stout and the frontal impressions small and punctiform; prothorax transverse, three-fourths wider than long, the sides broadly rounded, gradually slightly converging and becoming not quite straight to the very broadly rounded basal angles, the base transverse and margined throughout, not quite as wide as the feebly sinuato-truncate apex; surface smooth, steeply sloping laterally to the very fine reflexed margin, the foveæ narrow, short and sublinear, deep and obscurely punctate, the surface thence to the angles more feebly

convex and punctureless, the median stria distinct; elytra rather less than one-half longer than wide, a little wider than the prothorax, the sides parallel and feebly arcuate, the apex obtusely ogival, the sinus very feeble; striæ rather fine but impressed, deeply so toward suture and tip, where the intervals become more convex, the scutellar short, fine and oblique; dorsal puncture wanting, the lateral line of foveæ interrupted medially; anterior and middle tarsi (♂) rather strongly dilated and biseriately squamose. Length (♂) 7.3 mm.; width 2.7 mm. South Africa.

It is of course quite possible that this species may already be described under another name, but I have been unable to find any reference to it.

OSIMUS Mots.—There are many characters in the type and only species of this genus, the *Acinopus ammophilus* of Dejean, such as the broad and *Zabrus*-like form of the body, very stout tibial spurs, form of the head and long vestiture of the abdomen, which would seem to validate *Osimus* as a genus, rather than a subgenus of *Acinopus*, where it now rests; but my unfamiliarity with most of the true Acinopi gives to these assumptions but little value.

ACINOPUS Dej.—The assumed type of this genus, in comparisons which I have made with the preceding, is the species at present listed as *picipes* Oliv. The body is of a peculiar compact, parallel, convex and cylindric form, distinguishing it at once, not only from any *Harpalus*, but quite as distinctly from *Osimus*. The genus *Acinopus* appears to be peculiar to the palæarctic faunal regions.

OPHONUS Steph.—This genus was not considered to be distinct from *Harpalus* by Lacordaire, though so esteemed by modern European writers. In so far as the species before me, *azureus* Fabr., is concerned, this is undoubtedly the proper course, but in the recent catalogue of Heyden, Reitter and Weise, some other elements are incorporated with *Ophonus* which do not belong there, such for example as *Harpalophonus* Gangl., founded upon such forms as *hospes;* this is undoubtedly a *Harpalus*, in its broad sense, and has very little affinity with *Ophonus azureus*.

RAPHALUS n. gen.—The type of this genus, which is close to *Harpalus*, may be defined as follows:

***Raphalus convergens** n. sp.—Body oblong, moderately convex, strongly shining, black, the under surface more piceous, the legs, antennæ and trophi pale testaceous; head fully two-thirds as wide as the prothorax, slightly constricted behind the prominent eyes, the front very smooth, with excessively fine straight epistomal suture, behind which the foveæ

take the form of extremely small punctures, the oblique lateral part of the suture obsolete; antennæ extending fully to the thoracic base, very slender, the third joint but little longer than the fourth but much longer than the second; prothorax one-half wider than long, the sides evenly rounded, becoming oblique and broadly sinuate basally, the base feebly sinuate, except laterally, very finely margined, the angles slightly obtuse but not evidently rounded; surface feebly convex, smooth, broadly and feebly impressed near each side basally, the impressions with a few punctures; median stria fine, extending only to the obsolete anterior transverse impression, the side margins rather finely reflexed and subequally so throughout to the basal angles; elytra oblong-oval, with parallel and broadly arcuate sides, one-half longer than wide, a fifth wider than the prothorax, obtusely ogival at tip, with broad and feeble oblique sinus; striæ rather fine and slightly impressed, the scutellar free, moderate, oblique, the second with a discal puncture externally attached at apical fourth; lateral foveæ widely spaced medially; abdomen not punctulate; anterior and middle tarsi (♂) dilated and biseriately squamose beneath, the posterior slender, with the first four joints gradually diminishing in length, the first equal in length to the fifth. Length (♂) 9.2 mm.; width 2.5 mm. South Africa (Cape Town).

I am by no means certain that this species may not have been previously described, but can find no definite reference. If described, it can be recognized readily from the description. I took the single representative not far from the town more than thirty years ago.

The presence or absence of so-called opalescent lustre of the integuments is nearly always an important character, usually in fact generic in significance, for this play of prismatic color is due to an exceedingly minute strigilation, forming a true diffraction grating, such as is used for the formation of a light spectrum, while the absence of opalescence indicates that the minute sculpture is of an entirely different order, taking the form of reticulation, when sculpture of any kind is present.

Opadius n. gen.

The type of this genus was originally described by LeConte under the name *Cratognathus cordatus* and was compared with *Piosoma*, with which it may have somewhat more than a superficial affinity, owing to the well developed alternating series of interstitial punctures, only visibly however toward apex, together with a generally compact convex form of body and *Cratacanthus*-like prothorax. It was subsequently referred by Horn and LeConte

to *Harpalus*, because of the distinctly dilated and squamulose male tarsi. There can be hardly a doubt that it represents a distinct genus however, which is proposed under the above name. The single known species is the following:

Body stout, oblong and convex, shining, dark rufo-piceous, the under surface and legs a little paler; antennæ and trophi testaceous; head three-fourths as wide as the prothorax, with prominent and moderate eyes; antennæ rather slender, extending well behind the thoracic base, the third joint distinctly longer than the second or fourth; mandibles short and stout, flattened above, feebly strigose apically, the left with a finely incurved point at apex, the right simply obliquely acute at tip; frontal foveæ short, irregularly impressed; prothorax between a third and fourth wider than long, broadly rounded at the sides, sinuately narrowing basally, the angles right and sharply marked; base transverse, as wide as the apex, feebly bisinuate, finely margined; surface convex, with fine diffused punctures laterobasally, the median stria distinct, the foveæ short, rather deeply impressed, the side margins finely reflexed and equally so to the basal angles, being separated from the foveæ at base by a convexity as in *Cratacanthus* and *Glanodes;* elytra short, oblong-oval, evidently wider than the prothorax and two-fifths longer than wide, very obtuse at apex, the sinus indistinct, vestigial; sides broadly arcuate; striæ fine but rather well impressed, with a setigerous puncture just outside the second before apical third, the scutellar stria rather short; marginal punctures irregular, subinterrupted medially; basal joint of the hind tarsi barely longer than the second, evidently shorter than the fifth; abdomen with basal punctulation and some accessory setæ as in *Glanodes* and many Harpali. Length (♂) 7.3–7.5 mm.; width 2.8–2.9 mm. Arizona (southern). [*Cratognathus cordatus* Lec.]..... **cordatus** Lec.

The affinity of this species with the *Harpalus obliquus* of Horn, has been pointed out by that author under his description of the latter, which is here referred to the Daptini, especially because there is no evidence at hand that the anterior tarsi of the male are dilated and squamose. Perhaps, however, I may have mistaken the sex of the type of *Glanodes regressus;* it is quite different in general form from the types of the other species, owing to the relatively larger head and prothorax, and, as those types are unequivocally female, it is assumed that the type of *regressus* is a male. However, even though the anterior male tarsi of *Glanodes* should prove to be harpaliform, it cannot be congeneric with *Opadius cordatus*, though in such case to be placed near the present genus in the Harpalini, instead of in its present place at the end of the

Daptini, with which tribe it confessedly does not harmonize very well in facies.

Pharalus n. gen.

In this genus the habitus is peculiar, but more remindful of *Cratacanthus* than of *Harpalus*, where it now rests in our lists; the type was originally described by LeConte under the name *Pangus testaceus*, because of the absence of a mentum tooth; the tooth may however be wholly wanting or present in the form of a short though decided arcuate projection, being thus variable individually. The humeri are sharply denticulate. The only known species may be described as follows:

Body oblong, stout, parallel, strongly convex, very shining throughout and pale testaceous-yellow in color, without darker shading of any sort, the elytra highly polished in both sexes; head three-fifths as wide as the prothorax, with large and prominent eyes, the antennæ stout, not quite extending to the thoracic base; mandibles stout, the left much, the right scarcely at all, produced inward at apex; frontal foveæ small, sharply defined and deep; prothorax three-fifths wider than long, the sides broadly and feebly rounded, slightly converging and broadly, barely visibly sinuate posteriorly, the angles right and very sharp; base strongly margined, feebly sinuato-truncate, a little wider than the apex, which is broadly sinuate, with widely rounded angles; surface broadly convex, smooth, the side margins rather coarsely reflexed, more broadly so and deplanate basally, sparsely punctured throughout, the foveæ short, sublinear, deeply impressed and punctate, separated from the deplanate angles by a smooth convex surface; median stria fine but evident except apically; elytra oblong, fully one-half longer than wide, very little wider than the prothorax, obtuse at apex, the sinus vestigial, subrectilinear; striæ not coarse but very deeply impressed, the scutellar long and strong, joining the first; lateral foveæ small, the dorsal completely wanting; anterior and middle tarsi (♂) well dilated and inferiorly squamose, the posterior slender, with the first four joints decreasing very slowly, the first much shorter than the fifth. Length (♂ ♀) 9.8–10.7 mm.; width 3.8–4.3 mm. Illinois, Iowa and Missouri. [*Pangus testaceus* Lec.]..... **testaceus** Lec.

It is very difficult to understand just how to dispose of some of the so-called aberrant Harpalids of LeConte and Horn, especially those which I have here assigned to the genera *Glanodes*, *Opadius* and *Pharalus*. They all have accessory abdominal setæ, as in the *fraternus* group of *Harpalus*, with which they undoubtedly have a close affinity, and I have separated them more because of pro-

nounced peculiarities of habitus than any single structural character, although in *Pharalus testaceus* the ligula is abruptly and strongly dilated and very acutely angulate at each side of the apex and the paraglossæ are produced externally at apex, leaving an internal sinus adjoining the ligula, somewhat as in most of the Selenophorid genera.

Harpalus Latr.

This is the largest genus of the subfamily and one of the most important of the entire Carabidæ from the standpoint of extent, and perhaps the most difficult in regard to the taxonomy of its diversified elements. Here the mentum tooth, because of its inconstancy, has but little value in classification. The body is notably varied in habitus, due principally to the presence or absence of punctuation at various parts of the surface, to the female sexual characters on and at the apices of the elytra, in size and form of the body and in other ways, so that Lacordaire was very undecided as to its boundaries, including some named genera that have since been separated on more or less evident structural peculiarities. The mentum is of the usual short transverse form but the apical projections, limiting the large median sinus, are unusually acute and dentiform. The third joint of the labial palpi is generally but little shorter than the second.

Harpalus is the only genus of the subfamily that is distributed in about equal numbers through the palæarctic and nearctic regions. In the southern hemisphere it is rather abundant in South Africa, from which region I personally collected four or five species in the vicinity of Cape Town. It is however suspected by Bates that the genus does not occur in either South America or Australia.

In the following table of the groups into which our very numerous species may be apportioned, I have not attempted to assign subgeneric names except in a few cases, not knowing the named groups of the European fauna, with which a number of our own are doubtless identical, and I have furthermore limited the groups here defined to our own fauna alone, not attempting to incorporate even such as *Artabas* or *Pangus* of the European fauna. Our very isolated *viridiæneus* makes the closest approach to *Harpalophonus* and will probably have to be included therein.

Abdomen densely and suffusedly punctured toward the sides; mentum without vestige of tooth; elytra without dorsal puncture and with very feeble apical sinus; body large in size..Group I (*caliginosus*)
Abdomen not punctured toward the sides; mentum tooth variable....2
2—Elytra externally dentate at apex, at the anterior limit of the sinus..3
Elytra feebly sinuate externally or truncate at tip, not in the least dentate, the sinus rarely obsolete.....4
3—Elytra and abdomen never punctulate discally and without dorsal setigerous puncture; body unusually elongate. Group II (*erraticus*)
Elytra with suffused close-set punctuation laterally and apically and with a dorsal setigerous puncture, which is however inconstant and frequently wanting on one or both elytra; abdomen with suffused sparse punctulation which is obsolescent laterally..Group III (*veridiæneus*)
4—Sides of the prothorax parallel or nearly so.....5
Sides of the prothorax converging from about the middle to the base; body rather small in size and smooth.....9
5—Abdomen without accessory setæ, that is, setæ arising from sparse punctures irregularly disposed and sometimes transversely sublinear in arrangement.....6
Abdomen with accessory setæ.....8
6—Abdomen with fine sparse punctulation toward the basal parts of the segments; elytra truncate at tip in the female, slightly oblique in the male.....Group IV (*amputatus*).
Abdomen without fine punctulation, other than the usual basal punctures.....7
7—Pronotum flattened and strongly, densely punctured latero-basally and with large feeble vague foveæ; body rather large in size as a rule, the elytra generally without or rarely with a dorsal setigerous puncture and generally with more or less obvious suffused punctulation laterally, in the female of several species pervading the entire surface in a conspicuous manner; mentum tooth usually distinct; tarsal joints more or less hairy above.....Group V (*pennsylvanicus*)
Pronotum not distinctly flattened or very conspicuously punctured latero-basally, the foveæ generally rather deeply impressed and less vague than in V; body frequently more abbreviated except in the smaller species, the elytra never having suffused punctuation in either sex, though often very opaque in the female; elytra with a single discal setigerous punctuie, very constant and but very rarely wanting; mentum tooth feeble and inconstant, sometimes wholly obsolete; tarsi wholly glabrous above as usual..Group VI (*viduus*)
8—Body in form and facies nearly as in VI, rather diversified in size and outline, the pronotum and elytra similar, the single setigerous elytral puncture very constant as in that group...Group VII (*fraternus*)
9—Form rather narrow, moderately convex; pronotum feebly modified basally; elytra with a single discal setigerous puncture; abdomen without accessory setæ.....Group VIII (*spadiceus*)

These groups are of very unequal extent, the first and third being represented at present by single species and the eighth by

only two. It will be noted that the left mandible is more incurved at tip than the right, this seeming to be a somewhat general character in the subfamily.

Group I (*caliginosus*).

Subgenus **Megapangus** nov.

There is but a single extremely common and widely diffused species as follows:

Body large in size, elongate-oblong, moderately convex, shining, black above and beneath, the legs black, with the anterior and middle tarsi piceo-rufous, the antennæ and trophi testaceous; head rather large, three-fifths as wide as the prothorax, with moderately large and prominent eyes, the frontal foveæ unusually large and notably deep; prothorax two-thirds wider than long, the base broadly and feebly sinuate, very imperfectly margined, much wider than the apex, the basal angles right and very sharply marked, the sides broadly rounded and converging anteriorly, the side margins deplanate, gradually very broadly so basally and densely punctured, the foveæ very large, feebly impressed, vague and densely punctato-rugose; medial parts of the base very sparsely punctulate; lateral bead strong and abruptly elevated; median stria very fine; there are traces of a feeble anterior transverse impression, which is finely, suffusedly punctulate; elytra parallel, barely at all wider than the prothorax, one-half longer than wide, very obtusely ogival at apex, with obsolete and barely traceable sinus, the striæ strong, impressed, finely punctulate at the bottom, the scutellar very long, joining the first, which therefore bifurcates at base, the intervals smooth, feebly convex, the marginal gutter rather wide and deep, the marginal interval opaque and with fine suffused punctures extending onto the outer half of the eighth interval, the line of foveæ indistinct medially though scarcely interrupted; abdomen smooth and shining medially, punctured densely toward the sides and with asperate setigerous punctures medially at base; first four joints of the hind tarsi decreasing evenly and rapidly in length, the first longer than the fifth. Length (♂ ♀) 17.5–26.0 mm.; width 6.8–9.7 mm. Maine to California and Texas..... **caliginosus** Fabr.

LeConte placed this species in *Pangus* Zieg., apparently solely because of the absence of the mentum tooth. It is a very isolated species and merits subgeneric designation as proposed above. There is but little variation in this probably long geologically established species, except in size; one very large female from Illinois, however, has longer elytra and a noticeably larger head than the average.

Group II (*erraticus*).

Subgenus **Plectralidus** nov.

The habitus in this group is altogether isolated in the genus, the body being very elongate and rather large though extremely variable in size intraspecifically and the coloration varies from a peculiarly pallid tint to deep black; the external dentition of the elytral apices, which in the female sometimes becomes conspicuously spiniform, is a remarkable and distinctive character of the group. We apparently have six species as follows:

Basal angles of the prothorax obtuse and narrowly rounded or never sharply marked.....2

Basal angles sharply marked, not blunt and generally subprominent; outer prominence at the elytral apices very obtuse, never spiniform even in the female.....5

2—Outer angle of the elytral apices spiculiform, the spicule minute (♂) or long and spiniform (♀).....3

Outer angle distinct but never spiculiform, obtuse (♂) or right (♀)...4

3—Form rather narrow, very elongate, moderately convex, shining throughout (♂) or with the elytra duller (♀), piceo-rufous in color, the elytra nearly black; under surface, legs, antennæ and trophi rufous; head rather large, three-fourths as wide as the prothorax, with prominent eyes, the frontal foveæ very small, lying in large, feeble and very vague impressions; antennæ extending fully to the thoracic base; prothorax only about a fourth or fifth wider than long, the transverse, strongly margined base as wide as the broadly sinuate apex, the sides broadly and feebly arcuate, becoming gradually slightly convergent basally, the obtuse angles evidently rounded though distinct; surface smooth, the side margins rather strongly reflexed, the gutter coarse and deep, punctulate, much expanded into the flattened and sparsely punctured latero-basal regions, the foveæ rather large, feebly and somewhat vaguely impressed, punctulate; median stria fine; elytra long, three-fourths longer than wide (♂) and nearly so (♀), obtuse at tip, the striæ deeply impressed, with shining convex intervals and the sides feebly arcuate (♂), or with the striæ feebler, the intervals flatter and the sides more arcuate (♀), two-fifths to one-half wider than the prothorax; first four joints of the hind tarsi gradually diminishing in length, the first as long as the fifth. Length (♂♀) 11.7–16.0 mm.; width 3.7–5.8 mm. Rhode Island to Indiana. Eleven examples. . **erraticus** Say

Form nearly as in the preceding but notably stouter, larger in size, less shining and paler in color, the elytra brown, dull in both sexes; head nearly similar but with less prominent eyes; prothorax much more transverse, more than two-fifths wider than long, otherwise nearly similar, except that the flattened surface toward the obtuse and rounded hind angles is much less distinctly punctured; elytra nearly similar but broader and still more rounded at the sides, less

deeply striate and with less convex intervals in the male, the apical sinus deeper, the spine of the outer angle even more pronounced; lateral margins shallower and less narrowly reflexed. Length (♂ ♀) 15.0–18.0 mm.; width 5.3–6.0 mm. Northern New York to Missouri and Nebraska. Eight examples..... **caudalis** n. sp.

4—Body about as narrow and elongate as in *erraticus* but much more convex, extremely shining and sculptureless throughout above in the male and deep black in color, blackish-piceous beneath, the legs paler, rufous; head nearly as in *erraticus*, the eyes not quite so prominent; prothorax a fourth wider than long, throughout nearly similar, except that the reflexed side margins are a little narrower and the latero-basal punctures stronger as a rule, the angles obtuse and narrowly rounded, the sides more strongly converging basally than in either of the first two species; elytra shorter, two-thirds longer than wide, only about a fourth wider than the prothorax, the striæ similarly deeply impressed, with strongly convex intervals, the scutellar stria not quite so long, not joining the first, the apical sinus (♂) less broad and relatively deeper externally, the parallel sides more arcuate and with rather narrower reflexed margins; tarsi nearly similar, the first joint of the posterior fully as long as the fifth. Length (♂) 14.5–15.0 mm.; width 5.0–5.2 mm. New Mexico (Fort Wingate). Two examples..... **collucens** n. sp.

Body smaller and much shorter, more depressed and rather less shining, only a little larger in the female than in the male, the elytra (♀) more shining than in *erraticus* (♀) and very much more so than in the nearly opaque *caudalis*, black, the under surface more piceous, the legs pale testaceous, the antennæ and trophi pale as usual, the female a little paler than the male; head nearly as in the preceding though relatively not quite so large; prothorax much shorter, two-fifths to nearly one-half wider than long, similarly with basally converging sides and base somewhat narrower than apex, the surface and obtuse, narrowly rounded basal angles also similar; elytra three-fifths to two-thirds longer than wide, much less convex than in *collucens* but similar in this respect to *erraticus*, the striæ deeply impressed and the intervals strongly convex and almost equally shining in both sexes, the sinus deepest externally, the outer angle sharp but very obtuse, scarcely more so in the male than in the female; marginal line of foveæ sparse, smaller and confused medially but not interrupted; abdomen with the basal punctures very numerous, strong and conspicuously setigerous. Length (♂ ♀) 11.0–15.0 mm.; width 3.8–5.4 mm. New Mexico (Jemez Springs),—John Woodgate. Twelve examples..... **acomanus** n. sp.

5—Sides of the prothorax not or only very feebly and briefly sinuate before the basal angles, which are distinctly more than right. Body very much larger in the female than in the male, the apical sinus of the elytra broad as usual, rather feeble and broadly curved (♂), or deeper externally (♀), the angle very broadly obtuse and somewhat rounded in the former, nearly right and rather sharply marked as a rule in the latter, sex; head relatively a little larger than in *acomanus* but otherwise nearly similar; prothorax much more evidently

narrower than the elytra in both sexes, fully a third to two-fifths wider than long, nearly similar in outline and surface and with similarly notably converging sides toward base, where however they become straight and not feebly arcuate as in all the preceding species, the angle obtuse but sharp and generally slightly prominent externally; diffused latero-basal punctures distinct, the foveæ large and feeble as usual; elytra three-fifths to two-thirds longer than wide, parallel and broadly rounded at the sides, barely at all less shining in the female than in the male, the surface throughout nearly as in *acomanus*, the tarsi nearly similar. Length (♂♀) 12.0–16.0 mm.; width 4.0–5.8 mm. New Mexico and Arizona. Thirteen examples. [*Harpalus impiger* || Lec.]..... **retractus** Lec.

Sides of the prothorax conspicuously sinuate posteriorly, becoming parallel and straight for a considerable distance before the angles, which are absolutely right and sharply marked, not at all prominent externally. Body (♂) unusually narrow in form, moderately convex, shining, piceous-black, red-brown beneath, the legs testaceous; head nearly as in the preceding and similarly with the shallow concavity surrounding the small deep punctiform frontal foveæ obsolete; prothorax only about a fourth wider than long, the sides broadly rounded anteriorly, the base fully as wide as the apex and distinctly sinuato-truncate, finely but deeply margined; latero-basal punctures strong and close-set; elytra not quite a fourth wider than the prothorax, nearly three-fourths longer than wide, parallel, with broadly rounded sides, the apical sinus broadly curved externally, with the obtuse angle rounded; striæ deeply impressed, the intervals strongly convex and polished; humeri, as usual, not in the least denticulate. Length (♂) 13.3 mm.; width 4.7 mm. Arizona. A single specimen..... **rectangulus** n. sp.

In his original description of *retractus* (Proc. Acad. Phila., 1854, p. 79), under the name *impiger*, LeConte states that the elytra are unipunctate. Among the rather numerous examples of the various species before me, I am unable to discover a single discal setigerous puncture and am therefore at a loss to account for the statement quoted. In most of the species there is no great sexual disparity in the size of the body, but in *retractus* this becomes a very conspicuous character of the species. The mentum usually has a small or very short and more or less obtuse tooth, which in *retractus* is broadly rounded.

Group III (*viridiæneus*).

Subgenus **Harpalophonus** Gangl.

Our single representative of this group, which is much more developed in the palæarctic fauna, is a small, parallel and rather

convex species, very variable in color, in the discal elytral puncture and also varying in the number and disposition of the epistomal setæ in a most unusual manner.* The mentum has constantly a moderate and broadly triangular tooth. The species may be described as follows:

Form oblong, parallel, convex, shining throughout (♂), the elytra alutaceous (♀), black above and beneath when mature, the legs blackish-piceous to paler, the antennæ and trophi obscure testaceous; upper surface varying from obscure viridi-æneous to bright green or cupreous, the anterior parts sometimes green with the elytra cupreous; head moderate, the antennæ extending behind the thoracic base; prothorax one-half wider than long, the sides parallel, broadly rounded anteriorly, less so basally, the base transverse, strongly margined, feebly bisinuate and slightly wider than the apex, the angles slightly obtuse and rounded; apex sinuate, with broadly rounded angles; surface steeply sloping at the sides to the finely reflexed edge, the latero-basal regions distinctly punctured, the foveæ large but feeble and vague, separated from the sides by a convex surface, the median stria distinct; elytra parallel, about as wide as the prothorax, two-thirds longer than wide, obtuse at apex, the sinus nearly as in Group II, deep externally, where it is limited by an obtuse dentiform projection; surface smooth, diffusedly punctate on the flanks and toward tip, the striæ moderately fine and impressed, the scutellar long but seldom joining the first, the discal puncture very inconstant; abdomen with fine suffused punctures bearing short hairs and rather irregularly distributed, equal among themselves and largely wanting toward the sides; hind tarsi rather short, the first two joints equal, two to four decreasing, the first much shorter than the fifth; metasternum laterally and its episterna punctate as usual. Length (♂♀) 9.0–10.8 mm.; width 3.2–4.0 mm. Rhode Island to Lake Superior. [*H. viridis* Say, *assimilis* Dej. and *canonicus*, *convictor*, *ænescens* and *lustralis* Csy.].
viridiæneus Beauv.

The peculiar form of the elytral sinus, reproducing that of the preceding group and observable nowhere else in the genus, is exactly similar to that of an example in my collection labeled *Harpalophonus hospes* Sturm, from the European fauna; as there are also many other points of resemblance, I do not hesitate to place this species in that subgenus.

* In days of early inexperience and with the idea that duplication of the epistomal punctures might be important here as well as in the Anisodactylini, as stated by Horn (Proc. Am. Phil. Soc., 1880, p. 162), I described four species from as many individuals of this species (Cont. Descr. Syst. Col. N. A., I, p. 11), a mistake which proved to be most unfortunate in subsequent years from many points of view.

Group IV (*amputatus*).

Subgenus **Harpalomerus** nov.

Another very isolated type seems to require subgeneric designation as above. The body is oblong and subparallel and the upper surface is generally pervaded by metallic blue or green gloss as in the preceding group, though always of a darker shade when present; but it is chiefly distinguished by the form of the elytral apices, which are transversely truncate, with prominent sutural angle in the female though obliquely subsinuate in the male. The single discal puncture is apparently constant and I have noted only one example where there is a gemination of the epistomal punctures and this only on one side. There are three forms in my collection, which are probably specific in nature as follows:

Upper surface with dark blue to greenish metallic lustre.....2
Upper surface without trace of metallic lustre.....3

2—Body parallel, moderately stout and convex, polished, black when mature, a little less deep beneath, the legs obscure rufous, the femora generally black, the upper surface with deep violet-blue to green metallic lustre on the elytra, barely observable however on the head and prothorax, the elytra alutaceous in the female; head moderate, three-fifths as wide as the prothorax, smooth, with prominent eyes, the antennæ extending slightly beyond the thoracic base; prothorax one-half (♂) to three-fifths (♀) wider than long, parallel, almost evenly rounded at the sides, the basal angles broadly rounded and obliterated, the base margined, transverse, about as wide as the sinuate apex, the anterior angles very broadly rounded; surface very steeply, rather abruptly declivous at the sides to the narrow reflexed edge, which broadens and shallows slightly behind, the foveæ large, rather deeply impressed and strongly punctate, the punctures also often but not always scattered thence over the convex surface separating the foveæ from the sides; median stria very fine; elytra about one-half longer than wide, very slightly wider than the prothorax, parallel, the striæ rather strong and deep, the scutellar long, not or but very seldom joining the first; apical truncature (♀) transverse, straight, gradually becoming posteriorly prominent toward the dentiform sutural angles, or (♂) oblique and obsoletely sinuate and without dentiform sutural angles; abdomen with sparse punctulation, somewhat as in the preceding group but less extended; hind tarsi with the first three joints rather slowly decreasing, the fourth more abruptly shorter, the first much shorter than the fifth. Length (♂♀) 9.5–11.0 mm.; width 3.3–4.1 mm. New Mexico, Arizona, Colorado and Utah. Forty examples.
amputatus Say

Body parallel, very much broader than in the preceding, the metallic coloration confined to the elytra, deep violaceous-black (♂), almost

wanting or more greenish (♀), the general characters as in *amputatus*, the prothorax much more transverse though with similarly very broadly rounded basal angles, fully two-thirds wider than long, the surface nearly similar; elytra shorter, much less than one-half (♂), to two-fifths (♀), longer than wide, with broadly arcuate sides, barely wider than the prothorax, the apical truncature (♀) wider, straighter and only becoming denticularly prominent at the suture itself; tarsi somewhat longer. Length (♂ ♀) 11.0 mm.; width 4.2–4.4 mm. New Mexico. Three examples..... **transversus** n. sp.

3—Form oblong, moderately convex, testaceous in color, the elytra alutaceous in the female and without trace of metallic lustre, the head as in the others, the mandibles closely and finely strigose; antennæ a little shorter; prothorax nearly two-thirds wider than long, as in *amputatus*, except that the basal angles though obtuse are much less broadly rounded and not obliterated; elytra short, oblong, with broadly rounded sides, two-fifths longer than wide and very distinctly wider than the prothorax, the apical truncature not transverse as in the two preceding, but distinctly oblique from the broadly rounded external angles to the prominent and apically everted sutural angles and very feebly sinuate; under surface and legs still paler than the upper surface; hind tarsi more slender than in either of the preceding. Length (♀) 9.0 mm.; width 3.5 mm. Arizona. A single example..... **papagonalis** n. sp.

It is quite certain that the type of *papagonalis* is immature to some extent and that the normal coloration is darker, but there is no contraction or distortion due to drying; in any event, the form of the elytral tips and basal thoracic angles, as well as total absence of the metallic coloration, which is always observable even in the palest, most immature and testaceous examples of *amputatus*, will readily identify the species; it is also materially smaller in size in all probability.

Group V (*pennsylvanicus*).

This group includes a considerable number of forms, numbering among them our commonest species, *pennsylvanicus*, *erythropus*, and *compar* being extremely abundant almost everywhere east of the Rocky Mountains; it is also a very usual type of the genus throughout Europe and Asia. The body is in general rather elongate, the pronotum flattened and strongly, generally densely punctate postero-externally and with the basal angles distinct as a rule and but slightly blunt or rounded, though never sharply marked, it being one of the decisive marks of the true *Harpalus* throughout, that the angles are never sharply rectangular as in

Cratacanthus or *Pharalus* but always blunt and sometimes rather broadly rounded; it is only in very rare cases, such as *pleuriticus* Kirby, that the basal angles become in any way sharp at tip, and even there we find some slight bluntness. The pubescent upper surface of the tarsi constitutes a marked peculiarity of this group. Our species may be defined as follows:

Elytra without a dorsal setigerous puncture.....2
Elytra with a distinct dorsal puncture just outside the second stria, well behind the middle.....15
2—Elytra of the female evenly and rather closely punctured virtually throughout, the punctures sparser and limited to the lateral parts of the surface in the male.....3
Elytra not punctured throughout in either sex, rarely impunctate in both sexes as in *erythropus*.....4
3—Body moderate in size and width or rather narrow, elongate, very moderately convex, black or piceous-black above and beneath, somewhat shining (♂), the elytra opaculate (♀); legs, antennæ and trophi bright testaceous throughout; head two-thirds as wide as the prothorax, differing but little sexually, the eyes prominent, the foveæ minute, perforato-punctate, at the bottom of large feeble impressions; antennæ long, very slender, extending far beyond the prothorax, which is about a third wider than long, broadly, evenly rounded at the sides from apex to base, the latter transverse, margined and distinctly wider than the apex, the angles obtuse and narrowly blunt, the apex shallowly sinuate; surface broadly subdeplanate and closely punctate latero-basally, the margins rather coarsely reflexed, the foveæ large but shallow; median line fine but rather broadly impressed; elytra three-fourths longer than wide, about a fifth wider than the prothorax, parallel, feebly arcuate and narrowly reflexed at the sides, ogival at apex, the sinus shallow, even and evident; surface (♂) shining, rather strongly striate, the scutellar stria very long but free, the intervals feebly convex, the outer four with sparse feeble diffused punctures, the next three with very few widely scattered punctures of the same kind, or (♀) with even distinct punctures throughout; hind tarsi long, the basal joint nearly one-half longer than the second and longer than the fifth, the tarsi (♀) shorter and still more slender; in both sexes they are finely pubescent above and coarsely setose beneath; claws moderate, arcuate, feebly subdentate internally at base. Length (♂♀) 12.0–14.3 mm.; width 4.2–5.3 mm. Indiana and Missouri (St. Louis). Six examples. **vagans** Lec.

Body much larger and stouter, rather more convex, similar in lustre and coloration, the head larger, three-fourths as wide as the prothorax, the perforate foveæ less minute; mandibles similarly smooth and convex above; antennæ rather long though not extending behind the thoracic base; prothorax more transverse, nearly one-half wider than long, otherwise nearly similar, except that the latero-basal

sculpture is much coarser, denser and more rugose throughout; elytra relatively much shorter, three-fifths longer than wide, parallel, broadly rounded at the sides, very obtuse at tip, the sinus very feeble though evident; surface (♂) very shining, the intervals strongly convex suturad, the two outer rather closely, the next one more sparsely, suffusedly punctate, the next two with a few sparse punctures, more evident basally, or (♀) strongly, closely, very uniformly punctured throughout, more strongly so than in *vagans;* tarsi nearly similar in structure. Length (♂♀) 16.5–17.0 mm.; width 5.9–6.2 mm. Iowa (Keokuk) and Missouri (St Louis). Three examples. **actiosus** n. sp.

Body larger and more convex than in *vagans* and deeper black in color, much more slender and smaller than in *actiosus*, deep black, the legs, trophi and antennæ pale testaceous; head rather large, fully two-thirds as wide as the prothorax; mandibles black throughout; prothorax a third wider than long, not so transverse as in *vagans* but otherwise almost similar, slightly more convex, with the median stria finer; elytra (♀) more elongate, fully two-thirds longer than wide, otherwise nearly similar, except that the intervals are less flat and differing from the female of both the preceding species, where the small close-set punctures attain the suture without change of character or density, in having the close-set punctures end abruptly at the first stria, the sutural interval with scarcely any punctures, a few being visible basally. Male slightly stouter than in *vagans*, almost similarly punctured. Length (♂♀) 12.0–16.0 mm.; width 4.4–5.5 mm. Pennsylvania and Long Island. Three examples..... **haldemani** n. sp.

4—Punctuation toward the basal thoracic angles fine, sometimes with larger punctures intermingled, the surface there not so abruptly or so strongly flattened..... 5

Punctuation toward the angles decidedly coarse, the surface abruptly and more exactly flat..... 11

5—Elytra not punctured on the flanks in either sex; body smaller in size; head moderate..... 6

Elytra with suffused punctulation near the sides in both sexes, but so minute as only to be seen when carefully observed; body large; head notably large..... 7

Elytra with suffused punctures near the sides, which are strong and easily observed; head large..... 10

6—Form elongate-suboval, rather strongly convex, deep black, shining, a little less so (♀), where the body is somewhat stouter; legs, trophi and antennæ testaceous; eyes prominent, the frontal foveæ small as usual; antennæ slender, barely attaining the thoracic base (♀), a little longer (♂); prothorax two-fifths wider than long, the sides parallel and broadly, subevenly rounded, the angles slightly obtuse and blunt, the apex sinuate, narrower than the base, which is transverse and margined as usual; surface steeply declivous at the sides to the coarsely reflexed and punctured margin, which is lost in the general flattening at about basal third, the acute bead continuous throughout as usual; foveæ very shallow and vague; elytra three-

fifths longer than wide, slightly wider than the prothorax, parallel and feebly arcuate at the sides, ogival at tip, the sinus broad and evident; striæ rather fine, not much impressed, the scutellar very long, free; intervals flat or nearly so; hind tarsi slender, not puberulent above, the basal joint of the posterior distinctly longer than the fifth. Length (♂ ♀) 10.7–13.0 mm.; width 3.8–4.8 mm. New Hampshire and Rhode Island to Missouri and Iowa. Seventy examples. Extremely abundant..... **erythropus** Dej.

Form rather narrow and elongate, nearly as in *erythropus* but a little larger and with somewhat larger head, pale piceo-rufous in color, the elytra somewhat more obscure, the under surface slightly paler, rufo-piceous, the legs and antennæ pale flavo-testaceous; head nearly three-fourths as wide as the prothorax, with very prominent eyes, the antennæ long and slender; prothorax two-fifths wider than long, the outline and surface throughout nearly as in *erythropus;* elytra nearly similar in form, proportion, strong striation and very long scutellar stria, but differing very much in sexual characters, the surface not being polished in the male and dull in the female, but shining and only slightly and equally alutaceous in both sexes; tarsi slender, the posterior not pubescent above, with the first three joints decreasing evenly and rapidly in length, the first much longer than the fifth. Length (♂ ♀) 12.0–12.8 mm.; width 4.4–4.7 mm. Missouri (St Louis). Three examples..... **rufopiceus** n. sp.

Form notably broad, differing very much from the two preceding and two following species in this respect, piceous-black in color, barely at all paler beneath, the legs dark rufous: surface moderately dull, the elytra opaculate: head not two-thirds as wide as the prothorax, the eyes prominent, moderately large, the frontal foveæ very small, without surrounding depression, the antennæ slender; prothorax not quite one-half wider than long, the sides rounded, feebly converging basally, the base evidently wider than the apex, the general characters nearly as in *erythropus;* elytra shorter and broader, less convex, barely one-half longer than wide, about a fifth wider than the prothorax, the sides more rounding at base, the striæ sharply impressed, the intervals flat, the scutellar stria very long, fully a fourth as long as the elytra; abdomen strongly punctured at the sides of the base, closely medially as usual. Length (♀) 12.7 mm.; width 5.0 mm. Iowa (Keokuk)..... **deludens** n. sp.

Form even narrower than in *erythropus*, not parallel as in the next species, piceo-rufous, the elytra slightly more obscure, the under surface and legs rufous throughout in the type; head moderate, the frontal foveæ in feeble impressions; eyes rather prominent; prothorax relatively somewhat small and narrow, two-fifths wider than long, as in *erythropus,* except that the feebly converging sides basally are straight or feebly subsinuate, the angles slightly obtuse but unusually sharp, scarcely at all blunt at the apices, and also that the latero-basal punctures become widely separated between the feeble, vague and densely punctate foveæ and the sides; elytra fully one-half longer than wide and almost a third wider than the prothorax, the parallel sides unusually arcuate, the striæ sharply grooved, more

impressed suturad, the scutellar long, strong and free, the intervals flat laterally, shining and feebly alutaceous, the marginal not more opaque than the others; tarsi rather slender. Length (♂) 10.8 mm.; width 3.9 mm. New York (Willets Point, Long Island). One specimen..... **effetus** n. sp.

Form much more parallel and evidently more depressed than in any of the preceding species, rather dull black (♂), the entire under surface, legs, trophi and antennæ, also the reflexed edges of the prothorax, pale testaceous; mandibles black at tip; small foveæ of the front slightly less widely separated than in *erythropus*, the eyes and antennæ nearly similar; prothorax much more quadrate, somewhat as in *faunus* but shorter and with much finer and closer basal punctures; sides parallel, evenly but much more feebly arcuate than in *erythropus*, though otherwise nearly similar, the basal foveæ similarly very shallow and vague; elytra nearly similar in form but with the parallel sides straighter, the surface less convex and duller, two and three-fourth times as long as the prothorax and about a fifth wider. Length (♂) 12.0 mm.; width 4.3 mm. Missouri (St Louis). One example..... **fenisex** n. sp.

7—Hind tarsi not or very sparsely and inconspicuously pubescent above. 8

Hind, as well as the other tarsi, rather densely and conspicuously pubescent throughout their upper surface..... 9

8—Body rather stout and convex, deep black above and beneath, with testaceous legs, the upper surface polished throughout (♂) or dull, especially on the elytra (♀); head notably large, with moderate and prominent eyes, two-thirds to three-fourths as wide as the prothorax, the antennæ slender but not so long as in *pennsylvanicus*, barely extending to the thoracic base (♂); prothorax large, only just visibly narrower than the elytra, two-fifths to nearly one-half wider than long, the sides coarsely reflexed and punctured, broadly and subevenly rounded, the basal angles obtuse and roundly blunted, the impressions large, very shallow and vague; elytra three-fifths longer than wide, the striæ rather fine, the scutellar very long and strong as usual, the intervals flat (♀) or feebly convex and shining (♂); legs and tarsi nearly as in *erythropus*. Length (♂ ♀) 13.0–16.5 mm.; width 4.7–5.8 mm. Rhode Island and Northern New York to Indiana. Common. [*H. bicolor* Dej. nec Fabr.; *pennsylvanicus* Say nec DeG.]..... **compar** Lec.

Body much less stout and rather less convex, subparallel, shining in the male, piceous-black, variegated with piceous and pale testaceous beneath, the legs and antennæ pale as usual; head large, testaceous anteriorly; antennæ and eyes as in *compar*, the prothorax nearly similar throughout, except that the punctures basally are fine and feebler, gradually notably sparse from the large, feebly impressed punctate foveæ to the sides and not dense as in *compar;* elytra narrower and rather more elongate, fully two-thirds longer than wide, only a little wider than the prothorax, the striæ somewhat deeply impressed (♂) and with rather convex polished intervals; punctures at base externally only very few and close to the marginal bead;

legs and tarsi nearly as in *compar;* abdomen similarly finely punctured medially at base, the metasternal punctures also almost similar. Length (♂) 14.0 mm.; width 4.9 mm. Pennsylvania (near Philadelphia)..... **liobasis** Chd.

9—Elytra rather long, as in the two preceding species; body subparallel, moderately convex, shining (♂), piceous-black, the under surface gradually rufescent posteriorly; legs and other appendages pale testaceous; head large, nearly three-fourths as wide as the prothorax, the eyes a little larger but scarcely so prominent as in *compar*, the antennæ nearly similar, the epistomal setæ strikingly long; prothorax more than two-fifths wider than long, more depressed than in *compar* and broader, scarcely at all narrower than the elytra, the sides parallel and arcuate, more converging basally, the base equal in width to the apex and not broader as in *compar;* all other characters nearly as in that species; elytra fully two-thirds longer than wide, longer and relatively narrower than in *compar* but otherwise nearly similar, except that there are some distinct punctures toward base of intervals five to eight, not apparent in that species, the marginal interval similarly opaque; basal joint of the hind tarsi but little longer than the fifth, the tarsi not very slender. Length (♂) 15.0 mm.; width 5.5 mm. Two examples, one from Summit, Illinois, and the other without label in the Levette cabinet, probably from Indiana..... **pubitarsis** n. sp.

Elytra shorter than in any of the preceding species, a little less than one-half longer than wide, black or piceous-black, the entire under surface obscure rufous, the legs testaceous; upper surface rather convex, shining, the elytra (♀) subopaque; head notably large, three-fourths as wide as the prothorax, the eyes prominent as usual but relatively moderate in size, the epistomal setæ moderate; antennæ extending to the thoracic base; prothorax relatively not so large as in *compar*, two-fifths wider than long, much narrower than the elytra, throughout nearly as in *pubitarsis*, the base not distinctly wider than the apex; elytra fully two-fifths wider than the prothorax, the striæ rather deeply impressed even in the female, and with distinctly convex intervals, the scutellar stria moderately long; intervals five to eight with a few punctures, only very near base on the former, increasing to a loose irregular series through two-fifths on the latter; legs rather slender, the hind tarsi more slender and less conspicuously pubescent above than in *pubitarsis*, the basal joint very much longer than the fifth. Length (♀) 15.0 mm.; width 5.6 mm. Arizona. A second example from the same locality is smaller, relatively much narrower, with the prothorax about as wide as the elytra, with very long scutellar stria and with the punctures basally on the elytra nearly obsolete. Length (♀) 12.8 mm.; width 4.7 mm.

nactus n. sp.

10—Body large, stout and convex, deep black and strongly shining, the elytra (♀) only a little less so and with the micro-reticulation indistinct except near the sides; under surface blackish-piceous, the legs rufous; head actually but not relatively very large, only about three-fifths as wide as the prothorax, the epistomal suture unusually

deep, otherwise nearly as in *compar;* prothorax large, nearly one-half wider than long, the rounded sides converging anteriorly, the sinuate apex much narrower than the truncate and strongly margined base; surface and side margins nearly as in *compar*, except that the foveæ are rather deeper and the punctuation thence to the sides different, being of very fine, intermingled with coarser, punctures; elytra broad, one-half (♂) to two-fifths (♀) longer than wide, parallel, slightly though obviously wider than the prothorax, obtusely ogival at tip, the sinus broad and feeble but evident; striæ deeply impressed, the intervals convex in both sexes, the outer flat, opaque and with fine suffused punctulation, the next three or four with a very few sparsely scattered larger punctures, this sculpture similar in the sexes, though rather more evident in the male because of the more shining ground; hind tarsi rather slender, clothed sparsely above with short fine hairs, the basal joint (♂) unusually long, very nearly as long as the next two and much longer than the fifth. Length (♂ ♀) 14.5–17.0 mm.; width 5.4–6.8 mm. Texas (Austin). Nine examples. . . . . **texanus** n. sp.

Body large but narrower and much more elongate, convex, deep black above and beneath, the elytra (♀) alutaceous; legs bright rufous; head large, nearly three-fourths as wide as the prothorax, the eyes not very prominent, the foveæ very small; prothorax less than a third wider than long, the sides rounded anteriorly, feebly convergent and less arcuate to the base, which is equal in width to the apex and with the margin completely interrupted at the middle, the angles obtuse and narrowly blunted; surface as in *compar*, except that the reflexed side margin is narrower and does not expand posteriorly, the convexity extending more basally between the foveæ and the sides, though gradually disappearing toward base; elytra three-fifths longer than wide, fully a third wider than the prothorax, the parallel sides rather strongly arcuate throughout, the striæ as in *compar*, the surface with scattered distinct punctures latero-basally, the outer two intervals more finely, closely and evenly punctulate; tarsi relatively shorter than in *compar*, rather distinctly and moderately closely pubescent above, the first joint a little longer than the fifth. Length (♀) 16.5 mm.; width of elytra 6.1, of prothorax 4.8 mm. Pennsylvania. [*H. longior* Kirby?]. . . . . **longicollis** Lec.

Body much smaller than in either of the two preceding, resembling *erythropus* very closely, deep black above and nearly so beneath, the legs bright rufous; head very moderate in size, about three-fifths as wide as the prothorax, the eyes prominent, the foveæ very small but deep, punctiform; antennæ slender; prothorax two-fifths wider than long, broadly rounded at the sides, the latter somewhat more converging apically, the apex distinctly narrower than the base, which is transverse, finely but strongly margined throughout, the angles scarcely more than right but obviously narrowly rounded; surface moderately convex, the reflexed sides fine anteriorly, gradually but very slightly wider behind to basal third, where the gutter is lost in the general feeble flattening, punctate as usual; foveæ moderate and very shallow; elytra but little more than one-half longer than

wide, barely a fifth wider than the prothorax, alutaceous in both sexes though more strongly in the female; surface (♀) punctured laterally and basally as in *longicollis*, the fine punctures of the outer two intervals very feeble, or (♂) with the punctures more minute and very sparsely scattered on the basal parts of the fifth, to nearly throughout the seventh, interval, the minute punctules of the outer two intervals extremely few in number and subobsolete; hind tarsi with very few fine hairs above. Length (♂♀) 10.5–13.0 mm.; width 4.0–5.0 mm. Rhode Island and New York (Plattsburg). Six examples..... **dolosus** n. sp.

11—Form parallel, the prothorax about as wide as the elytra..... 12

Form more oblong-oval, the prothorax always visibly, though never greatly, narrower than the elytra..... 13

12—Size moderate, not very convex, shining, the elytra only feebly alutaceous in the female, blackish-castaneous in color, the under surface more rufous, the legs pale testaceous; head well developed, three-fifths as wide as the prothorax, the eyes moderately prominent, the antennæ slender, moderate in length; prothorax a fourth to third wider than long, nearly quadrate, the parallel sides very feebly rounded, more converging anteriorly, the apex distinctly narrower than the base, which is transverse, margined throughout, with the angles right and narrowly rounded; surface feebly convex, rather widely reflexed at the sides, the gutter strongly punctate, gradually slightly widening and merging in the general flattening near basal fourth; basal parts strongly punctured throughout the width, more finely medially, coarsely in the large vague foveæ and more sparsely near the sides; elytra oblong, parallel, with very feebly arcuate sides, not three-fifths longer than wide, the sinus feeble, the striæ coarse and deep, extremely finely punctulate along the bottom, the scutellar long, coarse and free; intervals (♂) flat or nearly so and impunctate, or (♀) with the fifth and seventh usually having very widely spaced subserial puncture and the two outer intervals very minutely, sparsely punctulate, the foveæ of the lateral line strong, uninterrupted; hind tarsi almost completely glabrous above. Length (♂♀) 10.5–13.5 mm.; width 3.3–5.0 mm. Rhode Island to Missouri. Common. [*H. badius* Dej.]..... **faunus** Say

Size much larger, rather depressed, blackish-piceous in color, rufescent beneath, the legs pale flavo-testaceous, shining, the elytra (♂) very feebly alutaceous; head not quite three-fifths as wide as the prothorax, the foveæ minute, linear, lying in large impressions; eyes rather large, moderately prominent; antennæ unusually long, slender, extending well behind the thoracic base; prothorax less than a third wider than long, widest well before the middle, the sides broadly rounded, feebly converging and less arcuate thence to the very obtuse and narrowly rounded angles, the base transverse, somewhat wider than the apex, feebly arcuate near each side, margined; surface depressed, with strong median stria from the feeble anterior impression to the base; sides coarsely reflexed and punctate, the gutter but slightly wider posteriorly and losing itself in the flattened hind angles; foveæ large, very densely and rugosely punctured and rather deep; elytra nearly

as in *pennsylvanicus* throughout but with straighter sides and flatter surface, the strong scattered lateral punctuation similar, fully two-thirds longer than wide; hind tarsi distinctly punctulate and sparsely pubescent above, the basal joint (♂) almost as long as the next two and very much longer than the fifth. Length (♂) 15.5 mm.; width 5.5 mm. A single example unlabeled in the Levette collection.

thoracinus n. sp.

13—Prothorax very long, barely a fourth wider than long. Body unusually elongate and rather feebly convex, piceous-black, rufous beneath, the legs pale flavo-testaceous; head relatively large, two-thirds as wide as the prothorax, the eyes moderate, the foveæ very small, linear, not lying in depressions; antennæ unusually long, slender, nearly as in *thoracinus;* prothorax having evenly and moderately rounded sides, which gradually converge more anteriorly, the apex much narrower than the base, which is as in the preceding, the angles only slightly obtuse but unusually rounded; surface rather depressed, almost as in the preceding throughout, except that the median stria is very fine and the punctate lateral gutter becomes more thoroughly lost in the greater flattening before basal fourth; elytra three-fifths longer than wide, about a fifth wider than the prothorax, the parallel sides broadly arcuate, the oblique sinus very long, feeble, the surface nearly as in *pennsylvanicus* but less convex and with the rather strong, irregularly scattered punctures much more numerous, sparser internally but traceable to some extent as far as the suture; intervals more convex; hind tarsi (♂) very long, distinctly, though not densely punctulate and pubescent above, barely visibly shorter than the tibiæ, the second joint distinctly longer than the fifth. Length (♂) 16.0 mm.; width 5.6 mm. Missouri (St Louis). One specimen.

protractus n. sp.

Prothorax transverse, never less than about a third wider than long. . 14

14—Body oblong-oval, elongate, rather strongly convex, black above, piceous-black beneath, the legs pale testaceous, shining, the elytra (♀) distinctly duller; head moderately large, generally a little larger in the female, the eyes moderate, the slender antennæ not quite so long as in the two preceding; prothorax rounded at the sides, more converging anteriorly, the apex much narrower than the base, which differs from the preceding in having the marginal bead interrupted or nearly so medially as a rule and vanishing laterally or barely traceable, the angles distinctly rounded, slightly obtuse; surface rather convex, the coarsely reflexed margins and large flattened latero-basal regions strongly and confusedly punctate or subrugulose, the foveæ large, only moderately shallow; elytra one-half to three-fifths longer than wide, slightly wider than the prothorax, obtusely ogival at tip, the sinus feeble; surface rather convex, with somewhat fine but well impressed striæ, the scutellar long and free; intervals feebly convex, having some feeble and sparsely scattered, irregularly but often sublinearly disposed punctures, in about outer half and a little less developed in the male than in the female; legs much less elongate than in *protractus* but with the hind tarsi (♂) barely visibly shorter than the tibiæ, the hairs

of the upper surface notably sparse, the second joint distinctly shorter than the fifth. Length (♂♀) 11.5–16.0 mm.; width 4.4–5.9 mm. Rhode Island and Lake Champlain to Florida and westward to Lake Superior, Colorado (Boulder Co.) and Mississippi; not at hand from Texas. Seventy examples. [*H. bicolor* Fab., *faunus* Dej. nec Say]..... **pennsylvanicus** DeG.

A—Similar to *pennsylvanicus* but narrower in form and with the elytra more elongate when compared with the combined head and prothorax; antennæ thicker and notably shorter, especially in the female; prothorax rather less narrowed anteriorly and with the large foveæ decidedly deeper; elytra distinctly wider than the prothorax, parallel, nearly two-thirds longer than wide, similarly deeply striate and sparsely and irregularly punctured laterally; hind tarsi (♂) much shorter than the tibiæ, sparsely and finely pubescent above, the first three joints decreasing uniformly and rapidly in length, the second distinctly shorter than the fifth. Length (♂♀) 14.0 mm.; width 5.4–5.6 mm. Utah. Three examples..... **mormonicus** n. subsp.

Body smaller in size and narrower, piceous to black in color, rather shining, the elytra (♀) slightly opaculate; under surface rufous to nearly black, the legs pale; head moderately large, the foveæ unusually developed, deep; eyes prominent, the antennæ slender; prothorax a third wider than long, parallel, feebly rounded at the sides, only slightly narrowing anteriorly, the apex evidently narrower than the base; surface, side margins and basal bead as in *pennsylvanicus*, the general facies more as in *faunus* but with less coarse though separated basal punctures; elytra two-thirds longer than wide, throughout as in *pennsylvanicus;* hind tarsi very slender, much shorter than the tibiæ, very sparsely and inconspicuously pubescent above, the first joint much longer, the second equal to, the fifth. Length (♀) 13.0 mm.; width 4.6 mm.; North Carolina (Southern Pines). New York—LeConte..... **convivus** Lec.

15—Body elongate and rather narrow, the general habitus nearly as in *pennsylvanicus*. Color piceous-black, the entire under surface and legs bright testaceous and concolorous; mandibles, antennæ and trophi bright testaceous, the first black at the tips; head moderate, with small and perforate foveæ, the eyes well developed, and prominent, the antennæ (♂) slender, extending behind the thoracic base; prothorax about a third wider than long, subparallel, the sides broadly rounded, more converging apically, the apex narrower than the base, which is transverse, rather finely but strongly margined throughout, the angles slightly obtuse and narrowly rounded at their tips; surface as in *pennsylvanicus* and with very feeble vague foveæ, but with much finer lateral reflexed margin and with finer punctures latero-basally; elytra fully two-thirds longer than wide, slightly wider than the prothorax, parallel, the sides feebly arcuate, the sinus feeble, the striæ fine but deeply impressed, the scutellar long, deep and free; intervals slightly convex, feebly alutaceous, 3–5–7 with minute and widely spaced, subserial punctures; all the outer intervals with minute sparse and suffused punctulation,

visible with difficulty, the discal setigerous puncture coarse, deep, behind apical third near the middle of the third interspace; hind tarsi rather short, with obsolete dorsal vestiture but of the usual structure in the group. Length (♂) 12.6 mm.; width 4.6 mm. Rhode Island (Boston Neck) ..... **abstrusus** n. sp.

Body less elongate, rather more convex, shining, the elytra (♂) not at all alutaceous; color castaneous, rufous beneath, legs obscure rufous, with blackish tibiæ and hind tarsi; antennæ obscure testaceous, with paler basal joint; head moderate, with prominent eyes and very small foveæ, the antennæ (♂) extending slightly behind the thoracic base; prothorax nearly one-half wider than the median length, the sides subparallel and strongly rounded, the apex unusually deeply sinuate and distinctly narrower than the base, which is transverse and finely but distinctly margined throughout, the angles obtuse and unusually broadly rounded; surface nearly as in the preceding, except that the foveæ are deeper, the numerous fine close punctures on the flattened latero-basal parts nearly similar; elytra shorter, one-half longer than wide, parallel, with broadly arcuate sides, the sinus vestigial, virtually obsolete and scarcely traceable; striæ rather fine but deeply impressed, especially suturad, the scutellar stria deep and free but only moderately long; surface wholly devoid of punctuation, the lateral line of foveæ uninterrupted, the discal puncture at three-fifths, adjoining the second stria externally, very large and deeply impressed; hind tarsi rather short, glabrous above but of the usual structure, the first three joints decreasing rapidly in length, the first longer than the fifth. Length (♂) 11.8 mm.; width 4.4 mm. Arizona (at base of Humphrey's Peak—9500 ft),—Snow.

pimalicus n. sp.

Body broad and much more abbreviated, more narrowed anteriorly, deep black above, black beneath, the coxæ, trochanters and median part of the prosternum paler, the legs deep black, the tarsi more or less rufo-piceous; abdomen feebly rufescent; antennæ piceous, the basal joint paler; lustre shining, the elytra (♀) sericeously opaque; head two-thirds as wide as the prothorax, the eyes somewhat smaller than usual; antennæ rather short, compressed as usual, the tenth joint on the flat side one-half longer than wide; foveæ minute; prothorax transverse, nearly three-fifths wider than long, widest a little before the middle, the rounded sides slightly converging and just visibly arcuate basally; base evidently wider than the apex, the marginal bead slightly interrupted at the middle, the angles obtuse and narrowly rounded; apex moderately sinuate, the angles very broadly rounded; surface nearly as in *abstrusus*, the dense punctures of the large latero-basal region fine and involving the feeble and vague foveæ, which however are rather deeply impressed longitudinally at the bottom; elytra short, barely two-fifths longer than wide, more than a fourth wider than the prothorax, the parallel sides distinctly arcuate, the sinus obsolete and barely traceable; striæ rather fine and not so deep as in any of the preceding species, the scutellar rather long and oblique; intervals flat, devoid of punctuation, the lateral foveæ as usual, the discal puncture large, impressed,

near the outer side of the second stria at three-fifths; tarsi rather short, the posterior glabrous above, the first joint scarcely so long as the fifth. Length (♂) 11.5 mm.; width 4.8 mm. Colorado (Boulder Co.). [*Harpalus alienus* || Lec.]..... **egregius** nom. nov.

Longicollis Lec., is stated by Horn to be the same as *longior* Kirby, but as this is doubtful to some extent, I have not made the change. A singular characteristic of nearly all the species is the fact that the larger examples in each sex are proportionally stouter than the smaller ones, and for this and other reasons it is a difficult operation to properly segregate the species in a miscellaneous mixture of material, but the species are nevertheless well defined, as a rule, and the placing of *compar* and *erythropus* as varieties of *pennsylvanicus* in the Henshaw list is a gross error. The hairy upper surface of the tarsi isolates this group from every other in our fauna but because of its inconstancy can scarcely be regarded as a generic character; it affects as well the similar European and Chinese species that are among my exotic material. In the Anisodactylini use will be made of similar features in the differentiation of certain genera allied to *Dicheirus*, as it there appears to be more significant taxonomically. The name *alienus* (1879), replaced above by *egregius*, is preoccupied by Bates (Proc. Zool. Soc., 1878, p. 591).

Group VI. (*viduus*).

This is by far the largest group of the genus and the species are rather diversified in habitus; the vast majority are small, being under 10 mm. in length, but there are some that are notably large by comparison. There is a parallelism in general outline and structure between some sections of this group and the next, so marked in a few cases as to suggest that the presence or absence of accessory abdominal setæ may be purely arbitrary as a group character, but it is utilized nevertheless as a convenient means of dividing the horde of species of these two groups into sections more readily aiding identification in dichotomous tables. The mentum tooth is small and inconstant, being entirely obsolete in some species such as *fallax*. *Patronus* reproduces almost the exact facies of the *fraternus* group, but there is no trace of accessory abdominal setæ; the absence of denticulate sutural angles in the female led me to believe that it might be the rare *funestus* of LeConte, but that

species is said to have accessory setæ and is from a more mountainous part of the country. The species may be known as follows:

Body of comparatively large size and broad heavy build, only descending to the neighborhood of 10 mm. in *rufimanus*.....2

Body small in size and always of more slender outline, very rarely measuring so much as 10 mm. in length.....5

2—Elytra polished in the female, the micro-reticulation very minute and feeble though not obsolete. Body oblong, subparallel, only very moderately convex, shining, deep black above and beneath, the legs black, the anterior and middle tarsi rufo-piceous; head three-fifths as wide as the prothorax, the eyes not very prominent, the foveæ small as usual, the antennæ fusco-testaceous, with the basal joint pale though clouded on its anterior or inner face; prothorax short and unusually transverse, not quite twice as wide as long, parallel, rounding and converging at the sides anteriorly, the apex moderately sinuate, narrower than the transverse base, the margin finer but not interrupted medially, the angles but little more than right and only very narrowly blunt; surface steeply declivous at the sides to the coarse marginal gutter, which rapidly broadens posteriorly, turning strongly inward and becoming obsolete near basal third, the foveæ narrow, linear, having a few sparse punctures, the surface thence to the sides almost flat and impunctate; elytra unusually long, two-thirds longer than wide, between three and four times as long as the prothorax and barely at all wider, the parallel sides very feebly arcuate; apex acutely ogival, the very oblique sinus extremely feeble though evident; striæ fine but well impressed, the scutellar oblique and moderately long, the intervals broadly convex, the third with a puncture before apical third that is discal, not touching the second stria; marginal line of foveæ uninterrupted as usual; abdomen with the basal punctuation very fine, sparse and almost obsolete; legs slender, the hind tarsi (♀) three-fourths as long as the tibiæ, with the first joint much longer than the fifth and alone having on its dorsal surface a few rather coarse scattered setigerous punctures. Length (♀) 13.0 mm.; width 5.2 mm. Louisiana (Morgan City),—Wickham.....**patronus** n. sp.

Elytra dull in the female but not or scarcely sericeous, the striæ not so fine and the intervals less flat.....3

Elytra densely dull and sericeous in the female, with the striæ very fine, much finer and less impressed than in the male, the intervals perfectly flat as a rule.....4

3—Form elongate-oval, strongly and unusually convex, deep black, rather shining, the elytra not very dull even in the female; under surface and legs also black or nearly so; head large, three-fourths as wide as the prothorax, the eyes well developed and prominent, the antennæ infuscate except at base; prothorax rather more than one-half wider than long, nearly as in the preceding in general characters but more convex, with very much finer marginal gutter, which broadens less and fades out more rapidly on the broadly and feebly convex impunctate latero-basal region, the apex distinctly sinuate

and narrower than the base, the foveæ linear, rather shallow, with fine dispersed feeble punctures; elytra much more convex than usual, oblong-oval, rather short, one-half longer than wide, barely three times as long as the prothorax and, at the middle of the arcuate sides, a fourth wider; sinus extremely feeble, barely traceable; striæ fine but well impressed, the scutellar long and oblique, the intervals broadly though evidently convex, the third with a fine puncture near apical third, touching the second stria; abdomen with the basal punctures extremely fine, sparse and scarcely traceable; met-episternum opaque but impunctate; hind tarsi (♀) with the first joint scarcely visibly shorter than the next two combined, smooth above like the others and nearly one-half longer than the fifth. Length (♀) 12.7 mm.; width 5.2 mm. New Hampshire.

solutus n. sp.

Form narrower, more elongate and less convex, deep black throughout, the legs black; antennæ dark brown, the two basal joints nearly black; head not quite three-fourths as wide as the prothorax, the eyes smaller than in *solutus;* frontal foveæ minute, rounded, perforato-punctiform; prothorax as in the preceding throughout and with the marginal gutter very fine anteriorly, much less transverse, however, being barely two-fifths wider than long, the basal margin narrowly interrupted medially and the foveæ slightly more elongate; elytra oblong-oval, rather convex but less so than in *solutus,* not quite one-half longer than wide and only barely visibly wider than the prothorax, the sides broadly rounded; apex gradually ogival, the sinus feeble though evident; striæ notably fine, barely impressed, the intervals nearly flat, the third with a small feeble puncture attached to the second stria; surface uniformly opaculate; abdomen with a few very fine punctures medially at base, the met-episterna opaque and with a few punctures near the inner angle; mentum tooth distinct as in the preceding; hind tarsi nearly similar. Length (♀) 13.8 mm. width 5.0 mm. New Jersey.....**providens** n. sp.

Form parallel (♂) or with the hind body feebly inflated and more convex (♀), black, polished, the under surface and legs black or nearly so, the tarsi of the two anterior pairs piceo-testaceous as usual; antennæ and palpi testaceous throughout; head large, especially in the female, three-fourths as wide as the prothorax, the eyes moderately prominent, the foveæ very small, perforate; antennæ (♂) scarcely extending to the thoracic base; prothorax two-fifths wider than long, parallel, rounding anteriorly, the apex slightly narrower than the base; surface as in the two preceding, except that the portion between the foveæ and the sides is still more convex, also impunctate, the foveæ linear but more broadly impressed and sparsely punctate, the basal margin interrupted at the middle; elytra (♂) one-half longer than wide, not at all wider than the prothorax and moderately convex, or (♀) only a third longer than wide, slightly wider than the prothorax and barely two and one-half times as long and strongly convex, obtusely ogival at apex, the sutural angles dentate (♀), the sinus extremely feeble; striæ moderate, deeply impressed and with convex intervals (♂), or scarcely impressed and with nearly flat intervals,

the opacity less marked medially and more broadly basally (♀), the second stria with a puncture at three-fifths (♂), which is wholly obsolete in the single female at hand; abdomen with fine sparse punctures behind the coxæ. Length (♂♀) 13.0–13.5 mm.; width 4.5–5.0 mm. Illinois..... **viduus** Lec.

4—Body rather large in size, the head very large. Color deep black, shining, the elytra (♀) sericeo-opaque; anterior and middle tarsi paler; head three-fourths (♂) to nearly four-fifths (♀) as wide as the prothorax, the eyes relatively rather small and prominent, the foveæ minute, punctiform; antennæ testaceous, blackish toward base, slender; prothorax one-half wider than long, as in *viduus*, except that the broadly convex surface between the large linear, broadly and deeply impressed punctate foveæ and the sides is irregularly and sparsely strewn with very fine feeble punctulation; basal margin differing in not being interrupted medially; elytra nearly two-thirds longer than wide, evidently wider than the prothorax, with rounded sides, which arcuately converge to the ogival apex from only slightly behind the middle, the sinus very feeble but evident; striæ (♂) rather fine, deeply impressed, with broadly convex polished intervals, or (♀) very fine, superficial, with perfectly flat opaque intervals, the scutellar stria long, the puncture at the second stria near apical third impressed and distinct (♂), or very small and feeble (♀); abdomen with the post-coxal punctures fine and sparse, asperulate as usual. Length (♂♀) 13.8–14.8 mm.; width 5.5–5.7 mm. Michigan (Whitefish Point—Schwarz) and Wisconsin (Bayfield—Wickham)..... **laticeps** Lec.

Body rather large in size, the head moderately large. Body oblong-suboval, more strongly convex than in *laticeps*, deep black throughout when mature, the abdomen sometimes rufescent; lustre polished, the elytra sericeo-opaque in the female; legs as in *laticeps;* head three-fifths to two-thirds as wide as the prothorax, relatively a little larger in the female, the eyes moderate and prominent; antennæ slender, testaceous, darker through most of the three basal joints as a rule; prothorax one-half wider than long, only very slightly (♂) or much (♀) narrower than the elytra, nearly as in *laticeps* throughout, the basal angles but slightly obtuse though narrowly rounded as usual, the foveæ a little shorter and not quite so deep, the punctures on the broadly and feebly convex surface thence to the sides very fine, sparse and feeble; elytra oblong, one-half (♀) to three-fifths (♂) longer than wide, the striation and intervals in both sexes very much as in *laticeps*, the dorsal puncture also similar; apical sinus very feeble though evident; sutural angles (♀) minutely denticulate; fine post-coxal punctures of the abdomen forming only a small patch, the terminal setæ two at each side in both sexes as usual; legs rather short, the tarsi unusually abbreviated, the posterior (♂) only about two-thirds as long as the tibiæ, polished and smooth throughout above, the basal joint slightly longer than the fifth. Length (♂♀) 12.8–14.0 mm.; width 5.0–5.6 mm. Colorado. (Boulder Co. and Leadville). Five examples. . . **montanus** Lec.

Body notably smaller in size, the head only moderate, the surface in both

sexes more depressed than in either of the two preceding. Color deep black throughout, the anterior and middle tarsi dark rufous; surface polished, the elytra (♀) sericeo-opaque; head three-fifths as wide as the prothorax, a little larger (♀), the foveæ small but not isolated from the suture as they are in the preceding, the antennæ and palpi slender, testaceous throughout; eyes as usual; prothorax transverse, one-half to three-fifths wider than long, throughout as in *laticeps* but with somewhat more arcuate sides and with the base toward the sides a little more anteriorly arcuate, so that the basal angles, while more obtuse, are more narrowly blunt and therefore better defined, the foveæ similarly deep and the diffused punctulation thence to the sides similar; elytra short, one-half longer than wide to obviously less, the striation and intervals in both sexes as in *laticeps* and *montanus*, the surface however less convex and the apices more abruptly and broadly obtuse, with the sinus wholly obsolete, the edge only a little less arcuate at its usual position; basal and post-coxal punctures of the abdomen much more numerous and widely diffused than in either of the preceding; legs and tarsi almost as in *montanus*. Length (♂ ♀) 10.8 mm.; width 4.1–4.3 mm. Lake Superior (Duluth and Whitefish Point)..... **rufimanus** Lec.

5—Head very large, sometimes nearly as wide as the prothorax.....6

Head moderate in size, though always evidently more than half as wide as the prothorax.....7

Head unusually small in both sexes, about one-half as wide as the prothorax; pronotal foveæ usually very feeble.....35

6—Form oblong, piceous-black, shining, head large [not narrower than the prothorax in diagnosis but probably overstated], subquadrate, slightly retracted behind the eyes, smooth, the frontal impressions small, foveolæform, the frontal suture distinct; prothorax subquadrate, slightly shorter than wide, rather rounded at the sides, truncate at apex and base, the hind angles slightly obtuse and rounded; surface slightly convex, finely margined at the sides; anterior transverse impression remote from the margin, arcuate; median stria deep, abbreviated anteriorly, the basal foveæ small, deep, feebly punctate, the punctures extending to the angles; elytra obscure castaneous, [slightly bronzed — Proc. Acad., 1865], parallel, the apices not sinuate, deeply striate, the intervals feebly convex, the marginal series of foveæ not interrupted; antennæ, palpi, epipleura and legs ferruginous. Length 8.7 mm.; width 3.2 mm. Lake Superior.
megacephalus Lec.

Form nearly similar, moderately convex, highly polished throughout (♂), pale castaneo-testaceous, the elytra not evidently darker, the under surface, legs, mouth parts and antennæ very pale testaceous; tip of mandibles and disk of labrum blackish; head (♂) scarcely more than three-fifths as wide as the prothorax, the foveæ minute but lineiform, the eyes moderate and prominent, the antennæ slender; mandibles short, very thick, polished, but with the inner part very minutely and closely longitudinally strigilate, except toward base; prothorax transverse, one-half wider than long, parallel, the sides very moderately rounded, the apex slightly narrower than

the base and only very feebly sinuate; base transverse, the margin interrupted medially, the angles but slightly obtuse though unusually broadly rounded; surface convex, the reflexed margin fine anteriorly, gradually becoming about three times as wide and rather abruptly lost on the feebly convex surface in about basal third, the foveæ moderately deep, broadly impressed, strongly and closely punctate; finer punctures are also sparsely scattered over the surface thence to the sides; stria extremely fine and feeble; elytra not quite one-half longer than wide, barely as wide as the prothorax, gradually rounding and obtuse from slightly behind the middle, the oblique sinus rather short and extremely feeble, the edge about straight; striæ strong, deeply impressed, the scutellar rather long and also deep, the intervals (♂) distinctly convex, polished, without evident microreticulation, the third with a distinct puncture attached to the second stria near apical third; lateral line of foveæ very widely spaced medially but not interrupted; hind tarsi glabrous above, the first joint distinctly shorter than the fifth. Length (♂) 9.6 mm.; width 3.4 mm. New Jersey. [?*H. viduus* Lec., i. litt.; Sm. Cont. Kno., 1860, p. 3—a name subsequently given to an entirely different species.] A female 10.0×3.8 mm. in dimensions, from Wisconsin, is also placed here for the present; the head is a little larger, being about two-thirds as wide as the prothorax, the latter less abbreviated though still rather strongly transverse, similar, except that the lateral gutter expands and curves inward more rapidly near basal third, at the same time losing itself on the feeble latero-basal convexity; the elytra are very shining though the minute sculpture is somewhat evident, the sinus barely more than straight and the basal joint of the hind tarsi is fully as long as the fifth—in the female of the preceding species the basal joint is generally relatively shorter than in the male; the mentum tooth is obsolete in both, being simply a median arcuation..... **recisus** n. sp.

7—Mentum distinctly and more or less strongly, often acutely toothed. 8

Mentum with an extremely short and generally broadly rounded tooth. 15

Mentum edentate, usually without trace of tooth..... 22

8—Legs black or in great part black..... 9

Legs wholly or in great part ferruginous..... 13

9—Elytral striæ feebly crenulate. Form oblong-elongate, convex, parallel, strongly shining, deep black throughout, even the anterior and middle tarsi (♂); head not quite three-fifths as wide as the prothorax, the eyes moderate, the mandibles black, rufescent just before the tip; antennæ slender, the joints long, testaceous, gradually infuscate basally, the basal joint pale; prothorax rather long, barely two-fifths wider than long, the sides subevenly and very moderately rounded, more converging anteriorly, the moderately sinuate apex much narrower than the base, which is very feebly, angularly sinuate, the fine margin feeble at the middle, the angles rather broadly rounded; surface smooth, the very finely reflexed lateral margin continuing unmodified to the base, the foveæ rather deep, broadly linear, rugosely punctate, the convex surface thence to the sides impunctate, the stria extremely fine and feeble; elytra long, fully

two-thirds longer than wide, parallel, only very little wider than the prothorax, rounding behind in about apical third, the sinus feeble and rather short though distinct; striæ fine but impressed, the scutellar unusually short, free, the intervals broadly convex, the puncture a little before apical fifth, the very fine punctulation of the striæ accompanied by disproportionately large but feeble crenulation of the intervals; basal joint of the hind tarsi barely visibly longer than the fifth. Length (♂) 10.5 mm.; width 3.8 mm. California (the locality not recorded). A single example..... **crenatellus** n. sp.

Elytral striæ smooth, impunctate and without trace of adjacent crenulation..... 10

10—Prothorax only very moderately transverse as in the preceding... 11

Prothorax decidedly shorter and more transverse, about one-half wider than long..... 12

11—Form (♂) unusually narrow and elongate, colored throughout as in the preceding and very shining; head less than three-fifths as wide as the prothorax, as in the preceding, except that the antennæ are slightly infuscate throughout, with the two basal joints paler; prothorax only about a third wider than long, similar throughout, except that the base is transverse, the margin rather widely interrupted medially and that there is a slight flattening of the latero-basal convex smooth surface in the vicinity of the rounded angles, the punctures of the foveæ, also, are sparser and less rugose; elytra not evidently wider than the prothorax, about two-thirds longer than wide, more gradually narrowing and rounded behind from a little behind the middle, the sinus short and feeble; striæ rather fine, slightly impressed, the scutellar very moderate, the intervals feebly convex, polished, the puncture near apical fifth; basal joint of the hind tarsi equal in length to the fifth. Length (♂) 9.0–9.8 mm.; width 3.3–3.4 mm. Oregon (locality unrecorded). A female with the same locality label is stout, relatively very much stouter than the female of *cautus*, rather dull throughout, the elytra densely opaculate, with the sutural angles obtusely prominent and the legs partially piceo-rufous. It may represent another species; it is 9.6 × 3.8 mm. in dimensions. **oregonensis** n. sp.

Form (♂)distinctly shorter and stouter, similar throughout in its deep black color, the antennæ however more as in *crenatellus;* surface less polished than in the preceding, the elytra even of the male being very feebly alutaceous and with the striæ finer, unimpressed as a rule and with almost perfectly flat intervals; head similar but a trifle larger; prothorax as in *oregonensis* throughout but more transverse, with the basal bead uninterrupted and with less obvious flattening near the hind angles but resembling it, and differing from *crenatellus,* in having the fine lateral reflexed margin very faintly enlarging before becoming obsolete at basal fourth; in the latter there is no trace of this; elytra much shorter, only one-half longer than wide and more abruptly rounding and obtuse behind in about apical third, the sinus much more transverse and not so strongly oblique as in the preceding, similarly feeble though evident; scutellar stria much finer and more superficial, like the other striæ, the dorsal

puncture near apical fifth still smaller; hind tarsi similar. Female only a little stouter but usually duller than the male, the elytra densely sericeo-opaque, the hind tarsi with the basal joint evidently longer than the fifth. Length (♂♀) 7.3–10.4 mm.; width 2.9–3.9 mm. (California (seacoast regions near San Francisco to Humboldt Co.) and Oregon (Clackamas Co.). Abundant. [*H. advena* Lec.; *defixus* Walk.]..... **cautus** Dej.

Form still shorter, oblong, parallel and convex, very shining, even the female elytra polished and with only slightly visible micro-reticulation; color deep black throughout, all the tarsi black or blackish; head rather less than three-fifths as wide as the prothorax, somewhat more convex than usual, the eyes moderate; mandibles wholly black, the frontal suture rather deep but fine, the adherent foveæ minute; palpi and antennæ testaceous, the latter slender; prothorax not quite one-half wider than long, the sides subevenly and feebly arcuate, the sinuate apex much narrower than the transverse base, the basal margin rather widely subinterrupted medially, the angles distinctly rounded; surface as in *crenatellus*, the extremely fine reflexed sides even throughout the length, the convexity of the disk extended with but little change broadly between the feeble linear, very finely and sparsely punctulate foveæ and the sides and impunctate; stria extremely fine and feeble; fine bead at the sides and base rufescent from diaphaneity; elytra equal in width to the prothorax, scarcely one-half longer than wide, somewhat abruptly circularly rounded behind in apical third, the sinus rather feeble but distinct, deeper externally, the outer angle very obtuse but evident, somewhat as in *viridiæneus;* striæ fine, feeble, the intervals flat,the puncture near apical fifth; abdomen impunctate, except a small patch behind the inner part of the coxæ as usual; first joint of the hind tarsi as long as the fifth. Length (♀) 8.7 mm.; width 3.5 mm. Mexico (Colonia Garcia in Chihuahua),—Townsend.

***atripes** n. sp.

12—Body (♀) oblong-oval, convex, deep black above and beneath, the legs black, the tibiæ rufous except at tip, the tarsi rufo-piceous, shining, the elytra rather opaque and subsericeous; head nearly as in *cautus;* mandibles black throughout, the antennæ and palpi testaceous, the former with rather shorter joints than in *cautus;* prothorax relatively small, one-half wider than long, the sides strongly and subevenly rounded; apex moderately sinuate, narrower than the transverse base, where the bead is fine and entire, the angles obtuse and distinctly rounded; surface nearly as in *cautus*, except that the marginal gutter, extremely fine at apex, broadens more rapidly and is finely punctate throughout, as in also the entire basal region from side to side, except for a short distance in the middle, the punctures fine, sparse and very feeble, the foveæ rather deep, somewhat acutely linear at the bottom; elytra scarcely one-half longer than wide, with parallel rounded sides, gradually obtusely ogival behind from slightly behind the middle, almost a third wider than the prothorax, the sinus obsolete, straight, the striæ very fine and feeble, the scutellar long, the intervals perfectly flat, the puncture

strong, impressed and at apical fourth; basal joint of the hind tarsi as long as the fifth. Length (♀) 9.7 mm.; width of elytra 3.8, of prothorax 2.9 mm. Oregon..... **persolus** n. sp.

Body much smaller and narrower than in any of the preceding, piceous-black, the legs black, with the tibiæ and tarsi rufescent; surface extremely shining, the elytra without trace of alutaceous lustre; head not quite three-fifths as wide as the prothorax, the eyes moderate but very prominent, the mandibles black, testaceous ante-apically; antennæ only moderately slender, infuscate, the basal joint pale; foveæ minute, the suture extremely fine and feeble; prothorax barely one-half wider than long, all the edges rufescent from diaphaneity, widest before the middle, the sides nearly straight, rounding anteriorly, the apex unusually narrowly and rather feebly sinuate, with extremely broadly rounded angles; base transverse, very much wider than the apical sinus, the bead fine and subentire, the angles but little more than right and only very narrowly rounded at tip; surface with transverse wavy rugulation, impunctate, the reflexed margin very fine apically, broadening slightly and disappearing near basal third; foveæ unusually conspicuous, very deep, coarsely linear, a third the total length and rugulose; elytra not quite one-half longer than wide, about a sixth wider than the prothorax, parallel, with feebly arcuate sides, arcuately rounding behind in about apical third, the sinus very feeble but with its outer angle somewhat obvious though very broadly rounded; striæ very fine, slightly impressed, the scutellar moderate, free, the feebly convex intervals irregularly crossed by impressed creases except laterally, the puncture very small, near apical third; basal joint of the hind tarsi as long as the last; abdomen without trace of accessory setæ or scattered punctures. Length (♂) 7.0 mm.; width 2.6 mm. Colorado (Boulder Co.). **macilentus** n. sp.

13—Mentum tooth rather long, though rounded obtusely at apex. Body oblong, moderately convex, shining, the elytra scarcely visibly alutaceous even in the female, piceous in color, the under surface paler, the legs, antennæ, trophi and epipleura testaceous; head three-fifths as wide as the prothorax, the foveæ small, perforate, the pale mandibles black at apex, the antennæ not very slender but of the usual length; prothorax two-fifths wider than long, almost transversely truncate at the apex, which is very nearly as wide as the base, the sides rounded anteriorly, feebly convergent and nearly straight thence to the base, the fine basal bead entire, the angles only slightly more than right, only extremely narrowly blunted; surface with some confused creases, the lateral reflexed margin very fine anteriorly, but little widening or incurved posteriorly and obsolete near basal third, the bead continuing unchanged to the base as usual, the foveæ rather short, deep, punctate, separated from the sides by a very feebly convex and sparsely punctulate area; elytra only two-fifths longer than wide, but very slightly wider than the prothorax, obtusely rounded in about apical third, the sides broadly rounded; sinus short and extremely feeble; striæ rather coarse and impressed, the intervals distinctly convex, the puncture strong and at apical

third. Length (♀) 8.0 mm.; width 2.2 mm. Vermont (Bennington Co.)..... **pleuriticus** Kirby

Mentum tooth very short and broadly rounded though obvious, approximating to the feeble arcuation characterizing the next section of the group 14

14—Body oblong, unusually feebly, evenly convex, highly polished throughout, deep black above and beneath, the epipleura rufous posteriorly; legs testaceous, the femora and tibial apices shaded somewhat with blackish; antennæ and trophi pale testaceous; mandibles black, with an ante-apical rufous area; head barely three-fifths as wide as the prothorax, with moderate and very prominent eyes, the foveæ minute, the antennæ slender; prothorax one-half wider than long, the apex rather deeply sinuate and much narrower than the base, which is transverse, with strong entire rufescent bead, which is continuous as usual with the marginal bead; surface testaceous at the sides, which are very finely reflexed anteriorly, the gutter distinctly broadening posteriorly, becoming punctate and then disappearing at basal fourth, the foveæ rather large, broadly impressed, deep and strongly punctate, the punctures continuing sparsely and more finely across the convex surface thence to the sides; stria extremely fine and feeble; elytra not quite one-half longer than wide and nearly a fifth wider than the prothorax, obtusely rounded in apical third, the sides very feebly arcuate, the sinus long and just visible; striæ moderate, rather abrupt, the scutellar subparallel, free, the intervals perfectly flat, the puncture strong, at apical fourth; humeri denticulate as usual; basal joint of the hind tarsi much shorter than the fifth; under surface alutaceous. Length (♂) 8.9 mm.; width 2.35 mm. California (Lake Tahoe)..... **futilis** n. sp.

Body stouter, oblong, more convex, less shining, the elytra (♀) moderately shining though alutaceous, black, the ambient thoracic bead and the entire epipleura obscure rufous; under surface piceo-rufous, the abdomen rufous, black toward the sides, dull; legs testaceous, the femora slightly more obscure; antennæ and trophi testaceous, the mandibles rufous, black at tip; head nearly as in the preceding; prothorax larger, less than one-half wider than long, as in the preceding, except that the basal bead is finer and interrupted medially and the feebly converging sides behind the middle straight, the angles much less broadly rounded, the basal foveæ broader, much shallower and more extensively punctate, the punctures extending somewhat closely and conspicuously thence to the sides; elytra nearly similar but broader, more convex, the striæ relatively a little finer and evidently though feebly impressed, with broadly convex intervals—a sexual difference, when compared with the male type of *futilis*, that reverses the usual rule, where the striæ are finer and more superficial and the intervals flatter in the female;—hind tarsi nearly similar, the basal joint much shorter than the fifth. Length (♀) 9.0 mm.; width 2.7 mm. California (without further indication of locality). A single example as in the preceding... **intactus** n. sp.

15—Legs varicolored as in some of the preceding species, the femora black, the trochanters paler, the tibiæ and tarsi rufous, the former blackish at tip. Body oblong, unusually depressed, shining, black, the epipleura piceous, the antennæ and trophi pale testaceous; mandibles black, testaceous ante-apically; head moderate, with the usual moderate prominent eyes, small foveæ and slender antennæ; prothorax very nearly one-half wider than long, the apex rather feebly sinuate, narrower than the base, the basal bead fine but entire, the angles nearly right through distinctly rounded; sides broadly arcuate, very slightly converging and nearly straight posteriorly; surface rather gradually declivous laterally, the fine gutter becoming slightly wider posteriorly and gradually disappearing, but not punctate, near basal third, the foveæ short, very shallow, finely and rather sparsely punctate, the feeble broad convexity thence to the sides with very fine, sparse and indistinct punctures; marginal bead unusually fine and thin; elytra not quite one-half longer than wide, obtusely rounded in apical third, about a fifth wider than the prothorax, the sides parallel and nearly straight, rounding slightly at base, the sinus very feeble though evident; striæ rather fine, feebly impressed, the scutellar deep, free, the intervals glossy, very slightly convex, the puncture small, near apical fourth; basal joint of the hind tarsi equal in length to the fifth. Length (♂) 8.7 mm.; width 2.4 mm. British Columbia (Frazier Valley). Probably allied closely to *carbonatus* Lec. . . . . **fugitans** n. sp.

Legs uniform pale testaceous throughout 16

16—Surface between the pronotal foveæ and the sides narrowly convex, becoming compressed and cariniform basally. Piceous-black in color, the elytra paler and more brownish and with a feebly submetallic gloss; under surface nearly black, the epipleura and legs pale flavo-testaceous; antennæ and trophi testaceous, the mandibles almost uniformly pale throughout; head fully three-fifths as wide as the prothorax, the eyes very prominent, the foveæ minute and punctiform; antennæ slender; prothorax not quite one-half wider than long, the sides rounded throughout, less so and somewhat converging basally, the base feebly arcuato-truncate, with the angles obtuse and distinctly rounded, much wider than the evidently sinuate apex, the basal bead fine but strong and entire; surface very finely reflexed at the sides apically, the gutter gradually widening and feebler posteriorly but traceable nearly to the base, the anterior transverse impression distinct medially though not very deep, the stria fine but rather broadly impressed, the foveæ short, deep, more rounded than usual, rugoso-punctate, sharply separated from the lateral subexplanate region by a basally rather acute carina, this part with minute sparse obsolescent punctulation; elytra one-half longer than wide, barely at all wider than the prothorax, obtusely rounding in apical third, the sides feebly arcuate, the sinus obsolete, the edge simply straight; striæ fine but deeply impressed, the intervals rather strongly convex, flatter laterally, the puncture coarse, deep and rather before apical third; basal

joint of the hind tarsi much shorter than the fifth. Length (♂) 8.7 mm.; width 3.15 mm. New Brunswick.....**foveicollis** Lec.

Surface between the foveæ and the sides broadly, feebly convex throughout and with more or less evident though sparse and fine punctulation.....17

17—Legs testaceous, the tarsi piceous to blackish in color. Body rather stout, parallel, deep black and very shining (♂), the elytra distinctly alutaceous (♀), the epipleura black; antennæ and trophi testaceous, the mandibles piceo-rufous, black at tip; head three-fifths (♂) to fully two-thirds (♀) as wide as the prothorax, the eyes only moderately prominent, the antennæ rather slender, the minute perforate foveæ not touching the very faint or obsolete suture; prothorax two-fifths wider than long, the sides subevenly and rather strongly arcuate, the apex distinctly sinuate, narrower than the base and with rather narrowly rounded angles, the base transverse, with the fine bead interrupted at the middle and the angles obtuse and rather broadly rounded; surface extremely finely reflexed at the sides apically, the gutter rather rapidly widening and punctulate posteriorly, becoming lost in the general feeble convexity near basal fourth, the foveæ rather broadly impressed, deep and strongly punctate; elytra short, two-fifths longer than wide, slightly though evidently wider than the prothorax, parallel, obtusely subcircularly rounded in apical third, the sinus short and extremely feeble, vestigial, the striæ rather fine, evidently impressed, the scutellar a sixth the entire length, the intervals evidently convex suturad, nearly flat laterad, the puncture small, near apical third; basal joint of the hind tarsi equal in length to the fifth (♂), or a little longer (♀). Length (♂♀) 8.0–8.5 mm.; width 3.2–3.4 mm. Labrador (W. St. Modest),—Sherman and in Michigan. Five examples.....**recensus** n. sp.

Legs clear and pale testaceous throughout, the tarsi not darker.....18

18—Sides of the prothorax from the middle to the rounded basal angles straight and feebly converging. Form oblong-elongate, rather convex, shining, the elytra (♀) only very faintly alutaceous, piceous-black, the elytra slightly brownish, the under surface black, somewhat rufescent medially and on the abdomen, the epipleura flavo-testaceous; antennæ and trophi testaceous; mandibles dark rufous, black at tip; head three-fifths as wide as the prothorax, the eyes prominent, the antennæ rather short, not attaining the thoracic base; prothorax rather large, two-fifths wider than long, the apical margin peculiar in being barely visibly sinuate, transversely truncate from a more posterior viewpoint, with very broadly rounded angles, but slightly narrower than the base, which is transverse, rounding slightly at the sides, the bead fine but entire; surface very finely reflexed at the sides, the gutter increasing but slightly posteriorly, becoming lost near basal third, the foveæ sublinear but broadly impressed, deep and rugosely punctate; transverse anterior impression evident medially, the stria very fine; elytra not quite one-half longer than wide, barely wider than the prothorax, parallel, with broadly rounded sides, obtusely rounded in apical third, the

sinus short and very feeble; striæ rather fine but somewhat deeply impressed, the scutellar slightly more than one-sixth the entire length, the intervals convex internally, less so laterad, the puncture slightly before apical fourth; basal joint of the hind tarsi very much shorter than the fifth. Length (♀) 9.7 mm.; width 3.7 mm. Colorado (Buena Vista—nearly 8000 ft. elevation),—Wickham.

æquabilis n. sp.

Sides of the prothorax rounded throughout, though less so basally, the apex distinctly sinuate and very evidently narrower than the base. 19

19—Pronotal foveæ short, linear, narrow and feeble though punctured. Body oblong-oval, rather convex, shining, black, partially subpiceous beneath, the ambient pronotal bead, hypomera, epipleura, antennæ, trophi and legs pale flavo-testaceous; head three-fifths as wide as the prothorax, with moderate, very prominent eyes and minute perforate foveæ, the mandibles rather bright rufous, black at tip, the antennæ slender as usual; prothorax fully one-half wider than long, the subtransverse base with the fine bead not definitely interrupted medially; surface with the marginal gutter fine, barely at all widening posteriorly and feeble, though punctulate, disappearing near basal third, the transverse impressions somewhat evident medially; punctuation evident basally almost throughout the width; elytra not quite one-half longer than wide, slightly wider than the prothorax, obtusely rounded at apex, with feebly arcuate parallel sides, the sinus very feeble though evident, the striæ fine but rather deeply impressed, the scutellar rather long; intervals notably convex throughout, polished, the puncture strong, near apical fourth on the second stria. Length (♂) 8.5 mm.; width 3.4 mm. British Columbia (locality not stated).....**lascivus** n. sp.

Pronotal foveæ sublinear as usual but very broadly impressed, strongly and closely punctured or rugulose.....20

20—Basal angles of the prothorax slightly obtuse but scarcely at all rounded, distinctly defined and only very slightly blunt at their tips. Body small, moderately convex, rufo-piceous, paler beneath —the type probably somewhat immature,—shining, the elytra only faintly alutaceous even in the female; head three-fifths the thoracic width, with prominent eyes, small perforate foveæ and rather slender antennæ, the pale mandibles black at tip, the labrum black, with fulvous edges; prothorax nearly one-half wider than long, the base wider than the apex, with the bead interrupted at the middle; surface with the reflexed edge only moderately fine apically, relatively only slightly widening posteriorly, becoming punctulate and disappearing behind basal third; basal punctuation wholly interrupted medially, elsewhere very distinct to the sides; elytra oblong, slightly less than one-half longer than wide, nearly a fifth wider than the prothorax, very obtusely rounded at apex, the sides broadly arcuate; striæ rather fine, only feebly impressed, the scutellar rather long; intervals not quite flat, the puncture near apical fourth; sinus very feeble though evident; basal joint of the hind tarsi distinctly shorter than the fifth. Length (♀) 7.7 mm.; width 3.2 mm. Wisconsin (Bayfield),—Wickham.....**pumilio** n. sp.

Basal angles of the prothorax distinctly and rather broadly rounded...21

21—Body oblong-elongate, convex, very shining, piceous-brown above, wholly pale ferruginous throughout beneath—the type probably somewhat immature;—head rather well developed, with prominent and well developed eyes, slightly more than three-fifths as wide as the prothorax, as in the preceding throughout, the antennæ rather stout, not quite attaining the thoracic base; prothorax fully one-half wider than long, the base transverse, the bead strong and entire; surface very finely reflexed at the sides anteriorly, the gutter rapidly widening, becoming flat, strongly punctate and wholly disappearing only at about basal sixth, the stria fine but strong, the basal punctuation strong throughout but interrupted medially; elytra not over two-fifths longer than wide, not evidently wider than the prothorax, obtusely ogival in about posterior two-fifths, the sides parallel and but feebly arcuate, the external margin, as also that of the prothorax, testaceous; striæ not very fine, slightly impressed, the scutellar long, free as usual; intervals not quite flat, the puncture near posterior third, rather small and not touching the second stria; sinus very feeble; basal joint of the hind tarsi much shorter than the fifth. Length (♂) 9.5 mm.; width 3.5 mm. Colorado (Boulder Co.).
perspicuus n. sp.

Body smaller and slightly less convex, oblong, shining, black, the elytra very dark brown; under surface black, the legs and epipleura bright testaceous; ambient bead of the pronotum testaceous, as is frequently the case; head very moderate, not quite three-fifths as wide as the prothorax, with well developed prominent eyes, the usually dark rufous mandibles black at tip; antennæ scarcely attaining the thoracic base; prothorax barely one-half wider than long, the base transverse, with the bead very fine though not quite interrupted medially; surface very finely reflexed at the sides apically, the gutter rather rapidly widening, curving inward, becoming feebly and sparsely punctulate and disappearing near basal third, the stria fine but rather broadly impressed; basal punctuation very fine and sparse on the smooth lateral convexity and interrupted medially; elytra not distinctly wider than the prothorax, rather abruptly rounded in about apical third, the parallel sides feebly arcuate, the sinus broad but extremely feeble; striæ rather strong, feebly impressed, the scutellar long, the intervals very moderately convex and as usual more so suturad than laterad, the puncture distinct and at the second stria near posterior third; basal joint of the hind tarsi evidently shorter than the fifth. Length (♂) 8.4–8.6 mm.; width 3.1–3.2 mm. Wisconsin (Bayfield),—Wickham.....**lividulus** n. sp.

22—Prothorax rounded at the sides anteriorly, the upper surface always black or piceous in color.....23

Prothorax oblique and feebly arcuate at the sides in nearly anterior half, the apex notably narrowed; upper surface vivid green in color throughout.....34

23—Legs pale ferruginous or testacous in color throughout.....24

Legs black, either entirely or in great part.....27

24—Surface between the pronotal foveæ and the sides narrower, more

strongly convex and generally wholly devoid of punctures. Body black above and beneath, the epipleura more or less piceo-testaceous, the antennæ and trophi pale, shining, the elytra (♀) alutaceous; head very moderate, distinctly less than three-fifths as wide as the prothorax, the eyes prominent and the antennæ slender; prothorax transverse, fully one-half wider than long, the sides rounded, less so basally, the apex deeply sinuate and much narrower than the base, which is transverse, the bead generally feeble or interrupted medially, the angles unusually broadly rounded; surface finely reflexed at the sides anteriorly, the gutter gradually wider and shallower posteriorly, disappearing near basal fourth on the latero-basal convexity; foveæ distinct, moderately impressed and with a few small punctures; in one example there is some extremely fine and feeble punctulation throughout latero-basally; elytra nearly one-half longer than wide, very little wider than the prothorax, obtusely rounded behind, the parallel sides feebly arcuate, the sinus extremely feeble though evident; striæ rather fine, generally not much impressed, the scutellar long; intervals flat to feebly convex, usually distinctly so suturally, the puncture a little before apical fourth; basal joint of the hind tarsi but little shorter than the fifth; mentum generally without trace of tooth, though sometimes the bottom of the emargination has a very feeble and broadly arcuate projection, nearly as in the preceding section of the group. Length (♂ ♀) 7.5–10.0 mm.; width 2.9–3.8 mm. Long Island and Virginia to Nebraska. Very abundant. [*H. mutabilis* Hald. and *proximus* Lec.] ..... **herbivagus** Say

Surface latero-basally flatter, though always feebly and very broadly convex and evidently punctured throughout, the punctures also extending along the lateral margin for some distance anteriorly . . 25

25—Basal angles of the prothorax rather broadly rounded, the sides of the base feebly posteriorly oblique. Body oblong, subparallel, rather convex, polished, the elytra (♀) subopaque; color black when mature, slightly piceous beneath, the abdomen partially rufescent; appendages throughout ferruginous; head scarcely three-fifths as wide as the prothorax, the eyes moderate, the antennæ slender and the foveæ small, perforate; prothorax less than one-half wider than long, much less abbreviated than in *herbivagus*, the sides subevenly rounded; apex sinuate, narrower than the base; sides finely reflexed, the gutter only slightly widening posteriorly, disappearing near basal fourth; foveæ short, rather broadly impressed, deep centrally and very densely, rugosely punctate; stria very fine; elytra less than one-half longer than wide, scarcely at all wider than the prothorax and barely two and one-half times as long, very obtusely rounded in about apical two-fifths, the sides broadly arcuate, the sinus vestigial, barely traceable; striæ rather fine, slightly impressed, the intervals feebly convex, nearly flat externally, the puncture distinct, near apical third (♂) or fourth (♀); basal joint of the hind tarsi about as long as the fifth. Length (♂ ♀) 8.0–10.6 mm.; width 3.2–4.2 mm. New Mexico and Colorado. Very abundant. Thirty-six examples.

fallax Lec.

Basal angles less broadly rounded, the base not posteriorly oblique laterally 26

26—Body oblong, strongly convex, piceous-black, the elytra dark brown, the under surface deep piceous-black, the epipleura pale testaceous; surface shining, the elytra (♀) slightly alutaceous but much more shining than in *fallax*, the scutellar stria much longer than in that species; head relatively a little larger, fully three-fifths as wide as the prothorax, the eyes prominent and the antennæ slender; foveæ small and perforate but lying in feeble impressions of the surface; prothorax one-half wider than long, the sides rounded anteriorly, feebly converging and straight in about basal half; base transverse, with the lateral part slightly rounded; apex much narrower and with unusually feeble sinus, the angles very broadly rounded; surface with the fine pallid marginal gutter much more dilated posteriorly than in *fallax*, disappearing nearly at basal third, the foveæ large, more broadly and evenly impressed but moderately deep, very densely and rugosely punctate; anterior transverse impression evident as a fine arcuate line, the stria fine but distinct; elytra relatively longer than in *fallax*, obtusely rounded in apical third, fully one-half longer than wide, barely at all wider than the prothorax, the parallel sides very feebly arcuate; striæ fine, feebly impressed, the puncture near apical third and on the third interval at some distance from the stria; apical sinus feeble but evident, less obsolete than in *fallax;* hind tarsi nearly similar though less elongate. Length (♀) 8.8 mm.; width 3.7 mm. Michigan (Marquette) ..... **innocuus** Lec.

Body oblong-elongate, smaller, narrower and rather less convex than the preceding, black when mature, with pallid ambient margins, the under surface black, the epipleura picescent, very shining above, alutaceous beneath; head rather more than three-fifths as wide as the prothorax, the eyes prominent, the foveæ rather coarse, perforate, not lying in feeble impressions; antennæ and palpi pale testaceous, slender; prothorax fully one-half wider than long, the base much wider than the apex and not more arcuate near the sides; apex more sinuate than in *innocuus;* sides more feebly arcuate anteriorly, thence nearly straight and feebly converging to the rounded hind angles; surface with the anterior arcuate impression broader, feebler and nearer the apex than in *innocuus* and barely evident, the sides, basal foveæ and punctuation nearly similar; elytra about as wide as the prothorax and one-half longer than wide, parallel, with feebly arcuate sides and obtusely rounded apex, the sinus very feeble but evident; striæ rather fine though well impressed, at least inwardly, the scutellar long, much longer than in *fallax*, the puncture adherent to the second stria near apical fourth; tarsi shorter than in *fallax*, the second joint of the intermediate (♂) nearly one-half wider than long. Length (♂) 8.8 mm.; width 3.2–3.25 mm. New Jersey and Maine (Wales—Frost). Confounded with *fallax* by LeConte and Horn but not very closely related ..... **placidus** Csy.

27—Marginal gutter of the pronotum posteriorly expanding and flattening to a slight degree 28

Marginal gutter not expanding posteriorly, the reflexed edge extremely fine throughout the length.....31

28—Basal angles of the prothorax very obtuse and rounded. Body abbreviated in form, convex, intense black throughout, the legs and tarsi also deep black, the anterior and middle coxæ partially rufescent; antennæ and palpi piceous, pale at base and apex respectively; lustre moderately shining, the elytra (♀) densely dull; head rather more than three-fifths as wide as the prothorax, the antennæ slender; eyes prominent, the foveæ very small and perforate; prothorax more than one-half wider than long, the sides rounded, less so and more converging than usual basally, the base evidently wider than the strongly sinuate apex; surface with a portion of an anterior impression at each side of the median line, which is fine, coming far from attaining base or apex, the impressions large, shallow, evenly concave and densely, evenly punctate, with fine punctures sparsely scattered over the broadly convex surface thence to the sides, the entire basal region alutaceous; elytra short, barely more than a third longer than wide, oval, a fifth wider than the prothorax, obtusely rounded at apex, the sides arcuate; sinus more transverse than usual and vestigial, not at all distinct; striæ rather fine, shallow and abrupt, the inner striæ and rather long scutellar slightly deeper, the first bifurcating at base, the intervals flat; puncture at the second stria near three-fifths; tarsi slender, the first joint of the posterior shorter than the fifth. Length (♀) 8.4 mm.; width 3.3 mm. Mexico (Salazar),—Wickham.....***aterrimus** n. sp.

Basal angles less broadly rounded; upper surface much more shining, the body more elongate.....29

29—Basal angles extremely obtuse, the tips moderately broadly rounded. Body oblong, moderately convex, black and shining, the under surface picescent, the legs black, the tibiæ and tarsi rufo-piceous; antennæ and trophi testaceous; head rather more than three-fifths as wide as the prothorax, the eyes moderate, the foveæ unusually minute; antennæ slender; prothorax slightly more than one-half wider than long, the sides evenly and strongly arcuate and hence especially arcuate basally, when compared with other species, resulting in very obtuse basal angles; apex distinctly sinuate, barely narrower than the base; surface very smooth and polished, the anterior impression obtuse but rather deep medially, the foveæ linear, very feeble, slightly rugulose, the somewhat flattened shining surface thence to the sides without evident punctures; lateral gutter extremely feeble and inclined, obsolete at basal third; elytra less than one-half longer than wide, slightly wider than the prothorax, very obtuse behind, the sides feebly arcuate; sinus extremely feeble, barely evident; striæ very fine but deeply impressed, the scutellar fine, rather long; intervals distinctly convex, the puncture near apical fourth. Length (♂) 9.0 mm.; width 3.4 mm. California (Tallac), —Fenyes.....**mansuetus** n. sp.

Basal angles only moderately obtuse, the sides of the prothorax behind the middle nearly straight.....30

30—Body small in size, oblong, moderately convex, black, rather shining,

the elytra (♀) only feebly alutaceous; margins of the prothorax testaceous; under surface black, the epipleura pale except basally; femora black, pale at base; tibiæ obscurely rufous, generally black apically, the tarsi and parts of the coxæ rufous; antennæ and palpi slender, testaceous; head fully three-fifths as wide as the prothorax, the eyes prominent; foveæ perforate, the frontal suture nearly obsolete; prothorax fully one-half wider than long; sides rather feebly arcuate, less so to straight basally; apex rather deeply sinuate, narrower than the base; surface smooth, the transverse impressions feeble but visible medially, the marginal gutter flatter and broader toward the vanishing point near basal third, than in the preceding, the foveæ short, broadly impressed and less linear than usual, sparsely punctulate, the convex surface thence to the sides rarely with a few very fine punctures; elytra two-fifths longer than wide, slightly though very evidently wider than the prothorax, very obtuse at apex, parallel, the sinus vestigial; striæ very deeply impressed, less so (♀), the intervals (♂) strongly convex, the puncture at or rather behind apical fourth; scutellar stria well developed; basal joint of the hind tarsi about as long as the fifth. Length (♂♀) 7.5–9.0 mm.; width 2.8–3.25 mm. California (Placer Co.) to British Columbia (Metlakatla) ..... **somnulentus** Dej.

Body much larger and more convex, polished, deep black throughout, the anterior and middle tarsi (♂) rufo-piceous; antennæ and palpi dusky testaceous, the former paler at base, the latter at the apices of the joints; head rather small though evidently more than half as wide as the prothorax, the eyes prominent; foveæ small and perforate, the antennæ slender; prothorax not very transverse and as wide as the elytra, two-fifths wider than long; sides broadly arcuate, less so or nearly straight basally, the angles rounded; apex rather deeply sinuate, much narrower than the base, the latter transverse and straight, finely and deeply margined throughout; surface smooth, the lateral gutter but feebly enlarged, feebly defined and inclined posteriorly, vanishing behind basal third, the foveæ narrow, rather long, linear though broadly impressed, deep and punctured, the surface thence to the sides evenly convex with the general surface and impunctate; stria fine but rather broadly impressed; elytra rather more than one-half longer than wide, rounded behind in about two-fifths, the parallel sides broadly arcuate; sinus not distinct, vestigial; striæ fine, feebly impressed, the scutellar joining the first; intervals nearly flat, the puncture near apical fourth; basal joint of the hind tarsi much shorter than the fifth. Length (♂) 10.5 mm.; width 3.8 mm. Yellowstone National Park,—Wirt Robinson ..... **pellax** n. sp.

31—Sides of the prothorax rounding basally, the basal angles very obtuse and broadly rounded 32

Sides of the prothorax less converging and nearly straight behind the anterior arcuation, the basal angles but little more than right and much less broadly rounded 33

32—Form oblong, moderately convex, strongly shining, black, only the ambient bead of the pronotum rufescent; under surface and epi-

pleura black, the legs black, the tibiæ and tarsi obscure rufous; antennæ and trophi testaceous; head unusually large for this section of the group, two-thirds as wide as the prothorax, the eyes prominent; antennæ slender, the foveæ very minute and perforate; prothorax short, more than one-half wider than long, the sides rather strongly arcuate; apex broadly sinuate and nearly as wide as the base, which is transverse; surface almost evenly declivous to the marginal bead throughout, the foveæ large, moderately deep, broadly impressed and scarcely at all linear, finely punctate, the convex surface thence to the sides generally with very few scattered punctules basally; median stria fine; elytra less than one-half longer than wide, slightly wider than the prothorax, the parallel sides broadly arcuate, the apex obtuse; sinus very feeble though evident as a rule; striæ rather fine but deep, the scutellar long, free, the intervals feebly convex, the puncture small, before apical fourth; basal joint of the hind tarsi much shorter than the fifth. Length (♂) 8.5–9.1 mm.; width 3.0–3.25 mm. Colorado,—Levette. Five of the examples are mutually similar as above, the sixth has perfectly flat strial intervals and is without the slightest vestige of the discal puncture on either elytron but seems to be similar otherwise..... **seclusus** n. sp.

Form broader, the size much larger, only feebly convex, shining, the elytra (♀) slightly alutaceous; under surface piceo-rufous, the epipleura nearly black; femora blackish-piceous, the tibiæ and tarsi dusky rufous; cephalic appendages pale testaceous; head rather large, more than three-fifths as wide as the prothorax, the eyes less convex than usual; antennæ slender, the small perforate foveæ lying in feeble impressions; prothorax short, more than one-half wider than long, the sides rather strongly arcuate throughout, the apex broadly sinuate and but little narrower than the base, which is transverse; surface evenly and rather gradually sloping to the marginal bead throughout the length, the setigerous puncture at apical two-fifths unusually large, impressed and conspicuous; basal foveæ large, broadly and deeply impressed and very densely punctate, the punctures and feeble rugulosity extending over the convex surface thence to the sides, gradually becoming sparser; anterior transverse impression distinct; between it and the anterior margin there are numerous longitudinal wrinkles; elytra not quite one-half longer than wide, subcircularly rounded in apical two-fifths, nearly a fourth wider than the prothorax, the parallel sides unusually arcuate; sinus short, very feeble but evident; striæ fine, feebly impressed, the scutellar long, uniting with the first, the puncture at apical fourth; basal joint of the hind tarsi but little shorter than the fifth. Length (♀) 10.0 mm.; width 3.9 mm. California (Placer Co.),—Koebele..... **opicus** n. sp.

33—Body oblong-suboval, moderately convex, deep black, very shining throughout (♂), the elytra (♀) densely sericeo-opaque; under surface and epipleura rufo-piceous, the femora black, rufous basally, the tibiæ and tarsi obscure rufous; cephalic appendages testaceous; head three-fifths as wide as the prothorax, relatively smaller than in the two preceding, the eyes prominent; antennæ slender; prothorax

more parallel, fully one-half wider than long, the sides anteriorly feebly arcuate, nearly straight posteriorly; apical sinus moderate, much narrower than the base, the apical angles very broadly, the basal very narrowly, rounded; surface almost evenly and very steeply sloping at the sides to the fine marginal bead throughout; basal regions more or less punctulate, rugulose or alutaceous throughout the width, but more shining, convex and obsoletely punctulate between the deep and broadly lineiform, densely rugose foveæ and the sides; base very obsoletely bisinuate but transverse; elytra one-half (♂) to two-fifths (♀) longer than wide, scarcely visibly or evidently wider than the prothorax respectively, obtuse at apex, the parallel sides broadly arcuate; sinus very feeble though evident; striæ fine, not deep, the intervals very feebly convex (♂) to perfectly flat (♀), the puncture near apical third or fourth respectively; basal joint of the hind tarsi evidently shorter than the fifth. Length (♂♀) 9.0–10.0 mm.; width 3.4–4.0 mm. Female much stouter than the male. Nevada (Reno). Four examples...**peritus** n. sp.

Body narrowly oblong, moderately convex, polished throughout (♂), deep black above and beneath, the epipleura sometimes picescent; legs black, the anterior and middle tarsi of the male slightly piceous; head fully three-fifths as wide as the prothorax, the eyes very prominent; antennæ slender, testaceous, the basal joints blackish, except the first two, which are testaceous; foveæ small, circular, very deep, abrupt and perforate; prothorax distinctly less than one-half wider than long, the sides rounded anteriorly, slightly convergent and nearly straight thence to the basal angles, which are but little more than right though rounded; base transverse, wider than the distinctly sinuate apex, the apical angles rather broadly rounded; surface somewhat feebly convex, abruptly and very steeply sloping, though rather shallow, at the sides, with the fine bead almost but not quite even and equal throughout the length; foveæ sublinear but broadly impressed and moderately deep, finely, not densely punctured, the lateral convex surface generally impunctate, though sometimes finely punctured throughout; transverse impressions wanting, the stria extremely fine and feeble; elytra nearly one-half longer than wide to less, but very little wider than the prothorax, obtuse at apex, the parallel sides feebly arcuate; sinus scarcely traceable, obsolete; striæ rather fine, feebly impressed, the scutellar long, the intervals feebly convex, the puncture at apical fourth; basal joint of the hind tarsi shorter than the fifth. Length (♂) 8.2–9.0 mm.; width 3.1–3.25 mm. Oregon (Clackamas Co.)....**celax** n. sp.

34—Form oblong-suboval, convex, shining, brilliant green above, the intervals 1–3–5 of the elytra more or less æneous; under surface black, subalutaceous, the epipleura and legs dusky testaceous; antennæ slender, black, the first three joints pallid; palpi rather short, testaceous; head nearly two-thirds as wide as the prothorax, the eyes unusually large and prominent; foveæ rather large, deep, irregular, with a fine branch curving outward slightly; mandibles short, dark rufous, black at tip; prothorax two-fifths wider than long, the sides broadly and subevenly arcuate, gradually more

converging anteriorly, the apex feebly sinuato-truncate, much narrower than the base, which is transverse, the bead strong and entire, the angles nearly right, narrowly blunted; surface convex, rather steeply declivous at the sides to the somewhat coarse pallid marginal gutter, which widens only slightly and very gradually posteriorly, disappearing near the base; foveæ very large, feebly concave, coarsely and rather densely punctate, a few finer punctures spreading over the feeble convexity thence to the sides; anterior impression distinct and angulate medially only, the stria fine but distinct, crossing the anterior impression; elytra nearly one-half longer than wide and a fourth wider than the prothorax, the apex obtusely ogival; sides parallel, feebly arcuate; sinus very feeble but evident, the apices (♀) very narrowly rounded; striæ coarse, rather deep, abrupt and groove-like, the scutellar long, the intervals flat; puncture on the second stria only a little behind the middle; legs, and especially the femora, unusually slender; basal joint of the hind tarsi equal in length to the fifth; marginal grooves of the metepisterna unusually coarse and deep. Length (♀) 8.0 mm.; width 2.8 mm. Illinois (Urbana),—Hart and Hood. . . . **gemmeus** n. sp.

35—Legs pale and clear flavo-ferruginous in color throughout. 36

Legs black or in great part dark. 37

36—Body very stout, oblong, narrowed anteriorly, not very convex, piceous-black, the epipleura paler, the antennæ and trophi testaceous, the mandibles blackish; lustre moderately shining, the elytra (♀) densely sericeo-opaque; head scarcely more than half as wide as the prothorax, the eyes moderately prominent; antennæ slender, the foveæ minute; prothorax relatively small, parallel, one-half wider than long, the sides broadly, subevenly arcuate, a little more converging anteriorly, the apex feebly sinuate, with very broadly rounded angles, evidently narrower than the transverse and finely margined base, the angles being right but distinctly rounded; surface steeply declivous to the very fine reflexed edge anteriorly, the gutter widening and curving inward shallowly posteriorly, disappearing at basal third, the foveæ narrow, feeble, rectilinear, obsolescent basally and impunctate, the impunctate area thence to the sides but little flattened; stria fine, almost attaining the apex; basal and apical regions with many fine longitudinal folds; elytra oblong, broad and short, not a third longer than wide, fully a third wider than the prothorax, parallel, with feebly arcuate sides and broadly obtuse apex, the sinus extremely feeble; striæ very fine and not deep, the scutellar long, the intervals perfectly flat, the puncture behind apical third; legs rather slender, the hind tarsi defective in the type. Length (♀) 8.2 mm.; width 3.5 mm. New Brunswick.

plenalis n. sp.

Body oblong, rather depressed, moderately shining, the elytra (♀) densely sericeo-opaque; color deep black above and beneath, the epipleura not paler; antennæ slender, they and the trophi testaceous; mandibles black, rufescent ante-apically; head slightly more than half as wide as the prothorax, with moderate prominent eyes and minute perforate foveæ; prothorax one-half wider than long, the

sides distinctly, subevenly arcuate and evidently converging nearly from base to apex, the latter strongly sinuate, with broadly rounded angles and much narrower than the base, which is transverse and finely margined, the angles obtuse and broadly rounded; surface steeply declivous anteriorly, the edge excessively finely reflexed, the groove widening and curving inward, becoming very faint and disappearing only near basal third; foveæ almost completely obsolete, except at their anterior ends, where there is a subpunctiform impression, the area thence to the sides broadly convex and impunctate; median stria rather strong but ending abruptly at the very faint vestige of the anterior impression; elytra two-fifths longer than wide, only very slightly wider than the prothorax, arcuately narrowing in about apical two-fifths but with the apex very obtuse, the sinus more distinct than usual but not otherwise peculiar; striæ very fine, not deep, the first a little stronger, the scutellar long, very fine, the intervals perfectly flat, the puncture shallowly impressed, rather before apical fourth; basal joint of the hind tarsi equal in length to the fifth. Length (♀) 7.6 mm.; width 3.2 mm. New Mexico (Las Vegas),—Meeske. . . . . **latebricola** n. sp.

Body small in size, oblong-oval, only feebly convex, polished and sculpturless throughout in both sexes, black above and beneath, the legs, antennæ and trophi pale testaceous, the epipleura rufescent; head notably small, conspicuously constricted behind the prominent eyes, the foveæ small, the epistomal suture very fine and feeble; antennæ slender, only feebly compressed, extending rather behind the thoracic base, the third joint subequal to the fourth and following and much longer than the second; prothorax barely two-fifths wider than long, the sides parallel and broadly, very moderately arcuate, more rounding and converging anteriorly, the apex rather deeply sinuate, much narrower than the base and with very narrowly rounded angles; base transverse, not at all bisinuate, very finely margined, the marginal line narrowly interrupted at the middle, the angles nearly right but distinctly rounded; surface even, slightly convex, extremely finely reflexed at the sides from apex to base, the medial stria distinct, obsolete basally and apically, the foveæ obsolete, there being barely a trace by obliquely reflected light; elytra two-fifths longer than wide, equal in width to the prothorax and slightly more than twice as long, obtusely ogival at tip, the sinus evident but short and feeble; striæ rather strong, the scutellar very short and feeble, the second with an adherent puncture near apical third, the close-set marginal line of strong foveæ abruptly and clearly discontinuous medially; intervals not quite flat, polished, basal punctures of the abdomen almost obsolete; legs short, the two anterior tarsi (♂) distinctly dilated and biserially squamose, the posterior rather long, very slender, with the first four joints decreasing evenly and rapidly in length, the first fully as long as the fifth. Length (♂♀) 5.8–7.2 mm.; width 2.1–2.7 mm. Virginia (Norfolk), Ohio and Missouri. . . . . **nitidulus** Chd.

37—Pronotal foveæ strong and deep, rather broadly linear but short, a fourth the total length, rugose but not definitely punctured. Body

very small, rather narrow, convex, strongly shining, black above and beneath, the epipleura rufescent except basally; legs obscure rufous, the femora black, the slender antennæ and palpi obscure testaceous; head barely more than half as wide as the prothorax, the eyes moderate, prominent, the foveæ minute but rather linear, not circularly perforate; mandibles rufescent, black at apex; prothorax nearly one-half wider than long, subparallel, the sides broadly, rather strongly rounded, slightly converging and becoming nearly straight basally, the angles slightly obtuse but only very narrowly rounded at tip; apex broadly sinuate, with broadly rounded angles, evidently narrower than the transverse, finely and strongly margined base; surface steeply declivous at the sides, the edge finely reflexed, the extremely fine gutter not varying in form from apex to base, though just visibly coarser medially, the lateral parts almost equally convex throughout the length; fine median stria rather broadly impressed, conspicuous and almost attaining the apex; elytra slightly less than one-half longer than wide, slightly wider than the prothorax, obtuse at apex, with very feeble though evident sinus, the parallel sides evidently arcuate; striæ rather fine, feebly impressed, the scutellar moderate in length, the intervals very feebly convex, polished, the puncture somewhat behind apical fourth; basal joint of the hind tarsi distinctly shorter than the fifth. Length (♂) 6.7 mm.; width 2.65 mm. Colorado (Eldora)....**paululus** n. sp.

Pronotal foveæ extremely feeble, linear but sometimes barely traceable. 38

38—Legs dark rufous in color, the femora black when mature.....39

Legs deep black throughout, the tarsi more or less paler, especially the two anterior of the male.....40

39—Form oblong-oval, rather convex, a little broader in the female, polished black above throughout, the elytra (♀) densely subsericeo-opaque; under surface and epipleura deep black, shining; antennæ and palpi pale testaceous, the former slender; head small but evidently more than half as wide as the prothorax, the eyes rather prominent, the foveæ small, deep, perforato-punctiform; prothorax two-fifths wider than long, the sides broadly, almost evenly arcuate and converging almost from base to apex, the latter deeply sinuate, with somewhat prominent and not very broadly rounded angles and very much narrower than the base, which is transverse and feebly margined, the angles nearly right but very broadly rounded; surface steeply declivous at the sides anteriorly to the extremely finely reflexed edge, the gutter rapidly expanding, turning inward and becoming feeble behind about the middle, obsolete behind basal third; foveæ linear but broadly impressed, not very deep though distinct, impunctate, the external convexity also impunctate; stria very fine, not impressed; elytra not quite one-half longer than wide, barely at all (♂) or very slightly (♀) wider than the prothorax, parallel, with feebly arcuate sides and obtuse apex, the sinus obsolete or vestigial; striæ very fine and scarcely at all impressed in both sexes, the scutellar well developed; intervals flat, the small puncture near apical fourth; basal joint of the hind tarsi equal in length to the fifth in both sexes. Length (♂♀) 8.2–8.7 mm.;

width 3.0–3.35 mm. Wisconsin (Bayfield),—Wickham. Five examples. ..... **lacustris** n. sp.

Form slightly stouter, the female scarcely differing from the male in outline, shining, black throughout above, the elytra (♀) sericeo-opaque; under surface and epipleura black and shining, the cephalic appendages pale testaceous; head rather evidently more than half as wide as the prothorax, nearly as in the preceding but with the minute foveæ more lineiform, the antennæ slender; prothorax two-fifths wider than long, the sides subevenly and rather strongly arcuate, slightly converging posteriorly but more so anteriorly, the apex deeply sinuate, with rather prominent and narrowly rounded angles and much narrower than the base, which is transverse and evenly margined, the angles nearly right but well rounded; surface throughout nearly as in *lacustris*, the linear and broadly impressed foveæ very evident (♂) or obsolescent (♀), punctureless; elytra throughout nearly as in *lacustris*, except that the striæ (♂) are slightly more impressed, the intervals not quite flat though usually perfectly so in the female; hind tarsi nearly similar. Length (♂ ♀) 7.7–9.0 mm.; width 3.15–3.7 mm. Colorado (Boulder Co.). Thirteen examples. Allied to *lacustris* but stouter and differing in the very much less anteriorly narrowed prothorax. ..... **coloradensis** n. sp.

40—Body oblong-oval, rather feebly convex, shining, black above and beneath, the elytra (♀) only faintly alutaceous; head but slightly more than half as wide as the prothorax, the eyes prominent, the antennæ slender and testaceous and the foveæ very minute; prothorax nearly as in *nitidulus*, two-fifths wider than long, the sides evenly and rather strongly arcuate, more converging apically than basally, the apex deeply sinuate, with narrowly rounded and rather prominent angles and very much narrower than the base, which is transverse, finely margined and feebly bisinuate, with the angles broadly rounded; surface feebly convex, steeply declivous at the sides anteriorly to the very fine reflexed edge, the very fine gutter not modified appreciably posteriorly, the foveæ linear, nearly obsolete, feebly and broadly impressed, with a few punctures basally; elytra two-fifths longer than wide, oblong, just visibly wider than the prothorax in either sex, abruptly very obtuse at apex, the striæ feebly impressed, with very slightly convex polished intervals (♂) or perfectly flat, with finer and more superficial striæ (♀), the sinus broad and feeble but very obvious; basal joint of the hind tarsi equal in length to the fifth. Length (♂ ♀) 7.4–8.0 mm.; width 2.9–3.2 mm. New Mexico (Las Vegas and Fort Wingate) and Arizona. Female not quite so large as the male as a rule. Ten examples. **ellipsis** Lec.

Body stouter and more oblong, moderately convex, very shining, black above and beneath, the anterior and middle male tarsi, antennæ and palpi pale testaceous; head barely more than half as wide as the prothorax, the eyes moderately prominent, the antennæ slender and the foveæ minute, rounded, perforato-punctiform and not quite adjoining the suture; prothorax shorter than in the preceding, being one-half wider than long but otherwise similar throughout; elytra

slightly wider than the prothorax, parallel, with feebly arcuate sides, as in *ellipsis* throughout, except that the apex is more ogival and less broadly obtuse and the sinus feebler, being almost obsolete, the small puncture similarly near apical fourth, the tarsi similar. Length (♂) 9.0 mm.; width 3.6 mm. Arizona (probably southern). **vespertinus** Csy.

Body larger, more elongate-oblong and more convex, deep shining black above and beneath, the tarsi rufo-piceous; antennæ slender, dark testaceous; head apparently not quite one-half as wide as the prothorax, nearly as in the preceding throughout; prothorax two-fifths wider than long, the sides subevenly and rather feebly rounded, more rounding and converging apically, nearly parallel basally, the apex deeply sinuate, with subprominent though rounded angles and much narrower than the base, which is rectilinear and finely margined, the angles right but broadly rounded; surface almost perfectly even throughout, the foveæ as nearly obsolete as possible, barely traceable by oblique illumination, the sides but slightly modified, though the latero-basal region is very slightly flattened, somewhat alutaceous and with some feeble anastomosing rugulosity; disk also with some feeble wavy transverse lines, the stria fine and feeble; elytra fully one-half longer than wide, about equal in width to the prothorax, parallel and feebly arcuate at the sides, the striæ (♂) rather fine but deep, slightly impressed, the intervals feebly convex, polished, the scutellar stria long, the puncture small and before apical fourth; basal joint of the hind tarsi equal in length to the fifth, the first three decreasing uniformly and not very rapidly in length as in the allied species. Length (♂) 9.8 mm.; width 3.6 mm. Colorado (Boulder Co.).....**mobilis** n. sp.

The last section, with small head, *Celia*-like facies and obsolescent pronotal foveæ—to which *paululus* does not strictly belong, being placed there solely on account of the unusually small head,—would seem to be at least subgenerically different from the more typical *Harpalus*, but there are no obvious structural peculiarities warranting the separation, other than those mentioned; the absence of a mentum tooth similarly characterizes many true *Harpalus* species, such as *herbivagus* and *fallax*. The above description of *megacephalus* is taken from the original, as I do not seem to have that species in my collection. There are also a number of other species unknown to me, that apparently belong to this *viduus* group according to LeConte; these, accompanied by descriptions drawn directly from the originals, are as follows:

H. fulvilabris Mann.—Oblong, black; prothorax short, wider than long, subquadrate, slightly narrowed behind, evidently canaliculate medially, the base obsoletely foveolate at each side, finely and, about the foveæ densely, punctulate, all the angles rounded; elytra striate, shining

(♂), opaque (♀), the apices obliquely truncate, slightly sinuate, the third interval with two impressed punctures [whether on each elytron or the two combined not stated]; trophi and mandibles, palpi and labrum, limb of the prothorax and elytra narrowly, the margins reflexed, and the antennæ and legs rufous. Length 8–9 mm.; width 3.3–4 mm. Alaska (Kodiak Island).

Evidently different from any known to me; the language referring to the elytral puncture is puzzling.

H. ventralis Lec.—Oblong-oval, parallel, subdepressed, nigro-piceous above; head smooth, the frontal suture distinct, the frontal impressions minute; mouth, antennæ and palpi rufo-piceous; prothorax one-half wider than the head, not shorter than wide [!], quadrate, anteriorly slightly emarginate, with the sides rounded anteriorly, posteriorly nearly straight, the base truncate, with the hind angles perfectly right, obsoletely explanate; transverse impressions almost obsolete, the stria fine, the basal foveæ linear, not deep; elytra feebly sinuate at tip, striate, the striæ fine, deeper posteriorly, the intervals flat; under surface and legs wholly pale rufo-piceous. Length 8.7 mm.; width 3.7 mm. Near Long's Peak.

The statement in regard to the form of the prothorax of this species prevents the assignment to it of any known to me. No mention is made of any peculiarity relating to the abdomen or hind body, as the name would seem to imply.

H. opacipennis Hald. (*Ophonus*)—Oval, glossy, chestnut-brown beneath and upon the middle and posterior thighs; antennæ, palpi, margin of the labrum, intermediate and posterior tibiæ and tarsi and anterior legs rufous; head with a small round indentation upon each side between the antennæ; pronotum much wider than long, transversely rugulose, with the basal impressions rugose, shallow, each with a very slight fossula; dorsal lines faint; elytra finely and simply striate; interstices flat, with a puncture upon the third one; tip slightly sinuate; surface sericeous. Length 9 mm. Southeastern Pennsylvania.

I cannot refer any one of the new forms here described to this species. Although both *plenalis* and *latebricola* have the opaculate elytra, the legs are clear and uniform testaceous throughout. *Opacipennis* may come just before *plenalis* in the table.

H. carbonatus Lec.—Elongate-oblong, being somewhat as in *cautus* (*advena* Lec.) but with basal thoracic angles less rounded; head obtuse, the eyes moderately prominent; prothorax wider than the head, shorter than wide, slightly narrowed posteriorly, the sides broadly rounded, obsoletely explanate posteriorly, the hind angles right, with their tips rounded; basal foveæ small, not at all deep and sparsely punctate; elytra (♀) opaque, the apices not at all sinuate; striæ impunctate, the intervals slightly convex; antennæ and palpi piceo-rufous. Length 10 mm. Saskatchewan.

The species named *fugitans* in the table came to me under the above name, but does not agree well with LeConte's short description; the form in *fugitans* is much shorter and more depressed than in *cautus*, the hind angles of the prothorax rather broadly rounded and the legs varicolored—rufous, with black femora. The elytral sinus, also, while feeble, is quite evident and the size is much smaller. It may be placed next to *fugitans* for the present.

The specimen serving for the description of *innocuus* Lec., in the table, is doubtless immature, as the body is said to be black, with the tibiæ and tarsi obscure ferruginous, in the original female type of that species, leaving it to be inferred that the femora are dark; the legs in the example described above are absolutely clear and pale flavo-ferruginous throughout. However, as it is from the same locality and the other characters agree, I suppose that it is properly identified.

Gemmeus is a remarkably aberrant species and might with some propriety form a group by itself; the frontal foveæ, elytral striation and general coloration are all notably distinctive.

The name *viduus* was originally assigned as a cabinet name by LeConte to a New Jersey species, here apparently described under the name *recisus*, but, as no description was given, this original *viduus* must be considered a purely manuscript name; that it was evidently so regarded by LeConte himself is proved by the fact that he subsequently (Proc. Acad. Phila., 1865, p. 103) gave the name to another quite different species from Illinois. The language used in coarse print remarks under the description of *fallax* (Col. Kansas, p. 3) is this: "A very similar nondescript species from New Jersey was kindly given me by Mr. Guex; it differs chiefly by the thorax being broader, with the sides less rounded and less narrowed anteriorly. I have named it *H. viduus*." It is easy to see that this was not intended in any way as a description, and I therefore have to differ with Chaudoir (Rev. Mag. Zool., 1868, p. 20) in his contention that the second *viduus* should have its name changed because of preoccupation. Furthermore, the few characters given to distinguish the original *viduus* from *fallax*, seem to be inaccurate; at any rate they do not apply in any way to *recisus*.

Group VII (*fraternus*).

The general habitus of the body is even more varied in this group than in the preceding, but all the species have on the abdomen, outside of the two regular longitudinal series of setæ, a number of additional setæ arising from more or less asperate punctures, scattered very irregularly and sparsely over the surface as a rule, generally shorter and less erect than the regular setæ of the series and termed accessory setæ by LeConte. Sometimes these setæ are reduced to a very small number, perhaps not more than two or three in an isolated cluster that may readily be overlooked, as in the case of *lewisi*, which was placed in company with *laticeps* of the preceding group by LeConte but which really belongs here. The mentum tooth varies greatly but is much less often obsolete than in the *viduus* group. There are no megacephalous forms, such as *laticeps*, but in *renoicus* and *sejunctus* the head becomes as small as in *n'tidulus* and allies of the preceding group, accompanied by an almost similar general habitus of the body. The *desertus* section seems however to be peculiar to this *fraternus* group in habitus, and the posteriorly oblique sides of the thoracic base and pale integuments impart a distinctive appearance. The species are not so numerous as in the *viduus* group, those known to me being definable as follows:

Body larger in size, always over 10 mm. in length and of very broad, frequently subdepressed form; mentum tooth generally of feeble development and more or less broadly rounded.....2

Body smaller, about 10 mm. in length, narrower and more parallel; mentum tooth completely wanting, the bottom of the emargination transverse and even.....6

Body still smaller, generally much under 10 mm. in length, of narrow, suboval or oblong-oval form, the mentum tooth rather well developed as a rule and often very acute, wanting in *oppositus*.....7

2—Elytra (♀) with the sutural angles not spinulose. Rather stout, parallel, black, shining, the antennæ and palpi obscure piceous, the latter subacute at apex, the legs black; head smooth, moderately large, the frontal impressions punctiform, the suture noticeably deep; prothorax broader than the head, almost twice as wide as long, quadrate, the sides moderately rounded anteriorly, the hind angles accurately right, explanate; surface subconvex, the anterior transverse impression arcuate and indistinct, the stria extremely fine, abbreviated anteriorly, the basal foveæ small, short and sparsely punctate; elytra rather obtuse, the apices feebly sinuate, more than twice as long as the prothorax, striate, the scutellar stria long;

intervals moderately convex, the third unipunctate posteriorly; middle tarsi (♂) not much dilated but with a double series of papillæ beneath as in the other species. Length 12.5 mm.; width 5.2 mm. Near Long's Peak..... **funestus** Lec.

Elytra (♀) with the sutural angles briefly spinulose.....3

3—Head larger, nearly two-thirds as wide as the prothorax; mentum tooth rather strong but distinctly obtuse. Atlantic regions.....4

Head more moderate, never more than three-fifths as wide as the prothorax; mentum tooth very short, more or less feeble and broadly rounded. Pacific regions.....5

4—Form broad and feebly convex, oblong-suboval, rather shining, the elytra (♀) densely sericeo-opaque; body piceous in color, dark red-brown beneath, the legs piceo-rufous; cephalic appendages testaceous; head smooth, with moderate and rather prominent eyes and small perforato-punctiform foveæ; antennæ slender, shorter (♀); prothorax three-fourths wider than long, the sides broadly arcuate anteriorly, feebly converging and subsinuous thence to the base, which is transverse, finely and strongly margined and evidently wider than the apex, which is broadly sinuate, with not very broadly rounded angles, the basal angles strongly defined, but little more than right, with the tips only very narrowly blunt; surface feebly convex, steeply sloping to the very finely reflexed edge anteriorly, the gutter widening posteriorly and nearly flat, opaque but scarcely at all punctate and disappearing in the broad latero-basal flattening in basal third, this region more alutaceous than the rest of the surface and with minute sparse punctules, the foveæ short, moderately deep, rugulose, opaque and punctulate; elytra less than one-half longer than wide, gradually ogival at tip, parallel, with broadly arcuate sides and almost a fourth wider than the prothorax; sinus broad, even and distinct and with a second short sinus next to the sutural spine; striæ fine, feeble, the scutellar long, the intervals (♀) perfectly flat, the puncture fine, on the second stria near apical third; metasternum laterally moderately opaque and finely, sparsely punctate; hind tarsi with the first joint equal in length to the fifth, the third two-thirds longer than wide. Length (♀) 13.4 mm.; width 5.6 mm. Michigan (Marquette)..... **lewisi** Lec.

Form in general similar but still broader and more parallel, deep black above and beneath, the legs black, the anterior and middle tarsi (♂) piceo-rufous; upper surface (♂) extremely polished throughout, or (♀) shining, the pronotum slightly alutaceous latero-basally and the elytra densely sericeo-opaque; head and antennæ nearly as in *lewisi;* prothorax similar throughout, except that the latero-basal flattened region is more strongly and closely punctured throughout and that it is more nearly as wide as the elytra, the latter almost similar, except that the sinuses at tip are feebler and that they are only about two-fifths longer than wide, rather more obtuse at apex and less than a fifth wider than the prothorax; metasternum (♀) at the sides more densely opaque, more rugose and more strongly punctured; hind tarsi (♀) similar, except that they are slightly more elongate. Length (♂ ♀) 13.3–14.0 mm.; width 5.2–5.9 mm.

New York (Plattsburg). Five examples. Closely allied to *lewisi* but apparently distinct..... **æsopus** n. sp.

5—Outline oblong-suboval, more convex and narrower than the preceding, deep polished black above, the elytra opaculate (♀); under surface and legs very faintly rufopiceous-black in mature examples; anterior and middle tarsi (♂) slightly paler; head smooth, the eyes moderate and rather prominent, the foveæ small, perforato-punctiform; antennæ slender but far from attaining the thoracic base in either sex; prothorax one-half (♂) to three-fifths (♀) wider than long, the sides broadly rounded anteriorly, less rounded to nearly straight and feebly converging posteriorly, the angles evidently more than right, with their tips rather narrowly blunted; base transverse, finely margined, feebly bisinuate, distinctly wider than the broadly and strongly sinuate apex; surface steeply declivous anteriorly to the moderately finely reflexed edge, the gutter finely rugulose, gradually widening, curving slightly inward and becoming shallow and inclined posteriorly and disappearing at basal third on the broad and feeble, scarcely more alutaceous and usually though not always punctureless latero-basal region; foveæ short, rather shallow, sparsely punctured, sometimes almost obsolete; elytra oblong, parallel, rather abruptly very obtuse at apex, not quite one-half longer than wide and but very little wider than the prothorax, the sides only very feebly arcuate, the sinus feeble, deeper externally, where the limiting projection is subprominently though rather broadly rounded; striæ fine, scarcely (♂) or not (♀) impressed, the scutellar notably long, the intervals flat to very feebly convex; hind tarsi with the basal joint not quite as long as the fifth. Length (♂♀) 10.4–13.4 mm.; width 4.2–5.5 mm. New Mexico, Colorado and Arizona. Very abundant. Forty-nine examples. [*H. oblitus* Lec. nec Dej.]. **lecontei** nom. nov.

Outline similar but always more elongate and larger in size, oblong, moderately convex, polished black (♂) throughout above, the under surface and legs black, the anterior and middle tarsi (♂) scarcely paler, piceous-black; antennæ nearly similar but dusky, blackish basally, the palpi blackish, pale at tip; head nearly as in the preceding; prothorax relatively shorter, fully three-fifths wider than long in the male, the surface nearly as in the preceding, except that the marginal gutter barely at all widens posteriorly and does not turn inward, disappearing at basal third, the vicinity of the hind angles more flattened, the anterior angles more narrowly rounded and the basal still more sharply defined, being barely even at all blunted at the apices, the sides anteriorly also are more strongly arcuate; elytra more elongate, slightly more than one-half longer than wide, nearly a fourth wider than the prothorax, with parallel and broadly arcuate sides, the sinus of the same general form but still feebler, the striæ similar though generally a little more impressed and the puncture similarly near apical third; hind tarsi differing distinctly, being very much longer, with the basal joint fully as long as the last. Length (♂) 12.5–14.5 mm.; width 5.2–5.6 mm. Utah and

Wyoming to British Columbia, Oregon and Northern California. Seven examples, all males. [*H. occidentalis* Chd.]. . . **fraternus** Lec.

6—Form oblong-elongate, subparallel, convex, shining and deep black above and beneath (♂), or black, with the elytra and under surface opaculate (♀), the legs dusky rufous, with the femora black, the anterior notably swollen, or, clear testaceous throughout, with the anterior not more swollen, respectively; antennæ rather thick, moderate in length, they and the palpi testaceous; head three-fifths (♂) to nearly two-thirds (♀) as wide as the prothorax, the eyes rather prominent, the foveæ small, rounded, very deep and perforate; prothorax one-half wider than long, the sides very broadly and feebly rounded, nearly straight though barely at all converging behind the middle, the base transverse, finely margined, with only slightly obtuse but rather broadly rounded angles, slightly wider than the apex, which is rather feebly sinuate and with broadly rounded angles; surface steeply declivous to the very finely reflexed edge anteriorly, the gutter becoming only a little wider posteriorly and disappearing at basal third, finely punctulate; foveæ short, linear but very broadly and moderately impressed, rather coarsely and closely punctate, the area thence to the sides broadly convex and with a few very sparse minute punctules; stria very fine; elytra about one-half longer than wide, only just visibly wider than the prothorax, obtusely rounded behind, parallel, with very feebly arcuate sides, the sinus very feeble though evident; striæ fine, the scutellar long, the intervals nearly to quite flat; puncture near apical fourth; basal joint of the hind tarsi equal in length to the fifth, the first three decreasing uniformly. Length (♂ ♀) 10.7–10.9 mm.; width 3.7–4.2 mm. Utah (Provo),—Wickham. Peculiar because of sexual differences in the legs. . . . . **uteanus** n. sp.

7—Head moderate in size, approximating three-fifths the width of the prothorax. 8

Head notably small in size in both sexes, not or barely more than half as wide as the prothorax. 24

8—Sides of the prothorax behind about the middle always evidently though very moderately converging to the base, as usual in the genus. 9

Sides of the prothorax nearly straight and perfectly parallel from the base to beyond the middle, where they become rather strongly arcuate at the apical angles. 23

9—Hind tarsi with the basal joint not or but very little shorter than the fifth in both sexes; sides of the thoracic base rather abruptly, posteriorly oblique; antennæ slender. 10

Hind tarsi with the basal joint much shorter than the fifth. 11

10—Body rufo-castaneous in color, always pale red-brown beneath, polished, the elytra (♀) slightly alutaceous; head smooth, with prominent eyes, the foveæ small, perforato-punctiform; mentum tooth strong and very acute; prothorax one-half wider than long, the sides strongly and subevenly rounded from base to apex, the latter broadly, deeply sinuate, with rather prominent and narrowly rounded angles and only slightly narrower than the base, which is

finely, deeply margined, the lateral obliquity always feeble and sometimes obsolete, the angles slightly obtuse and evidently rounded; surface almost evenly convex, the reflexed margin very fine and unmodified from apex to base, the latero-basal region a little more feebly convex, impunctate though usually slightly rugulose, the foveæ short, feeble, sublinear, impunctate but rather coarsely and feebly rugulose, these rugulæ faintly pervading most of the disk and longitudinal along the median parts of the base, the stria very fine; elytra oval, about as wide as the prothorax, rounded behind, parallel, with distinctly arcuate sides, the sinus barely traceable, vestigial, the striæ fine, the intervals nearly flat, the puncture small, behind apical third. Length (♂♀) 9.7–10.3 mm.; width 3.6–3.9 mm. Colorado (Eldora and Boulder Co.). Thirteen examples.

furtivus Lec.

Body smaller and narrower than in *furtivus* and darker in color, black or with the feeblest piceous tinge, blackish-piceous beneath, polished, the elytra (♀) slightly alutaceous; head nearly as in the preceding; mandibles rufous, the acute external margin basally and the tip black; prothorax much less transverse, barely two-fifths wider than long, the sides broadly rounded, becoming straighter basally, the apex rather deeply sinuate, with narrowly rounded angles and only slightly narrower than the base, which is rectilinear medially but abruptly strongly and posteriorly oblique at the sides, the angles therefore nearly right, narrowly rounded; surface nearly as in the preceding but without the rugulosity, extremely smooth and polished, with a few traces of longitudinal rugulosity medially near apex and base and with a few feeble punctures near the linear foveolæ and near the lateral edges; elytra oblong-oval, nearly one-half longer than wide, rather distinctly wider than the prothorax, especially in the female, the parallel sides broadly arcuate, the sinus vestigial and barely traceable; striæ rather fine, feebly impressed (♂), the intervals feebly convex (♂) or flat (♀), the puncture before apical fourth. Length (♂♀) 8.4–9.5 mm.; width 3.1–3.8 mm. New Mexico (Jemez Springs) and Colorado. Ten examples.

probatus n. sp.

Body still smaller, elongate-oval, convex, castaneous above, paler piceo-rufous beneath, highly polished, the elytra (♀) scarcely visibly less so and just perceptibly alutaceous; head as in *probatus;* prothorax also similar, except that the fine reflexed lateral margins are feebly dilated and punctulate posteriorly, the hind angles similarly nearly right and narrowly but very evidently rounded, the surface similarly very feebly flattened very near the hind angles, the foveæ linear and still feebler, sometimes slightly punctulate; elytra similar throughout but with feebler striæ and flatter intervals; tarsi still more slender; accessory setæ of the abdomen similarly extremely few in number. Length (♂♀) 7.7–8.0 mm.; width 2.9–3.25 mm. New Mexico (Socorro Co.),—Snow. Four examples. . . . . **nitescans** n. sp.

11—Mentum tooth distinct and usually more or less acute; basal thoracic angles never very sharply defined, always blunt at their apices as in the preceding section. 12

Mentum edentate or with a broad obtuse and very feeble tooth; thoracic angles sharply marked, not rounded.....22

12—Thoracic base rectilinearly transverse medially, posteriorly oblique at the sides, so that the basal angles are more posterior in position than the medial part as in the preceding section; color of the body always notably pale castaneo-testaceous even apparently when mature; antennæ slender, the general affinities strongly with the preceding three species.....13

Thoracic base transverse and, although sometimes feebly bisinuate, never having the hind angles more posterior than the medial parts; coloration always darker, generally nearly or quite black.....16

13—Sides of the prothorax but feebly arcuate and more parallel than in the preceding or following species, the base and apex subequal in width; thoracic foveæ larger and with conspicuous diffuse punctuation. Body elongate-oval, convex, shining, testaceous, the elytra (♀) but little more obscure and strongly shining, barely visibly alutaceous; head smooth, the eyes unusually developed, prominent, the foveæ very minute, feeble, sublinear; prothorax slightly more than two-fifths wider than long, quadriform, the apex broadly and feebly sinuate, with moderately rounded angles, the basal bead strong; sides nearly straight posteriorly, the angles right but evidently though not broadly rounded; surface very steeply declivous at the sides anteriorly to the deep and moderately finely reflexed edge, which is punctulate to the base, not dilated posteriorly and obsolete at about basal third; surface between the large impressed foveæ and the sides feebly convex and impunctate; stria very fine; elytra oval, very convex, barely two-fifths longer than wide, nearly a fourth wider than the prothorax, with rather strongly arcuate sides and gradually obtusely ogival apex, the sinus barely evident; striæ fine, slightly impressed, the intervals feebly and subequally convex throughout the width, the puncture near apical third; accessory setæ of the abdomen very few in number; hind tarsi very slender, the basal joint not so very much shorter than the fifth as it is in most of the following forms of this section, being fully four-fifths as long. Length (♀) 8.8 mm.; width 3.5 mm. New Mexico (Socorro Co.),—Snow.....**clientus** n. sp.

Sides of the prothorax strongly arcuate, more converging and straighter posteriorly, the apex obviously though not greatly narrower than the base and very feebly sinuate, with moderately rounded angles, the thoracic foveæ small, linear, very feeble and impunctate or very nearly; hind tarsi very slender and moderately long but with the first joint very distinctly shorter than the fifth.....14

14—Elytra almost circularly rounded behind, the sinus virtually obsolete. Body unusually slender, moderately convex, elongate-suboval, very shining, fusco-testaceous in color, the elytra barely more obscure; head with relatively rather less developed or prominent eyes than in *clientus* and with the foveæ small but perforato-punctiform; prothorax rather more than two-fifths wider than long, the base finely beaded, with the angles slightly obtuse and notably rounded; fine lateral gutter expanding, inclined but extremely feeble

and somewhat incurved posteriorly, disappearing on the slightly less convex latero-basal area, which like all the rest of the surface is smooth and impunctate; elytra about one-half longer than wide, elongate-oval, very slightly wider than the prothorax and with broadly arcuate sides, the striæ rather fine but somewhat groove-like; puncture in the type on the third interval distant from the second stria and very posterior, near apical fifth, on the left elytron, wholly wanting on the right; accessory punctures of the abdomen numerous, very irregularly disposed and bearing conspicuous stiff setæ. Length (♂) 8.0 mm.; width 3.0 mm. New Mexico (locality not recorded).....**malacus** n. sp.

Elytra more broadly obtuse at apex, the sinus feeble but evident.....15

15—Pronotum not flattened near the hind angles, the marginal gutter, as in the preceding species, scarcely at all expanding posteriorly. Body elongate-suboval, rather convex, pale brunneo-testaceous above, paler red-brown beneath, strongly shining; head nearly as in the preceding but with slightly more prominent eyes; prothorax also similar in outline and in the angles but with the stria not biabbreviated but entire and evidently coarser and the foveæ still feebler, being almost completely obsolete; elytra shorter, not quite one-half longer than wide, the sides more arcuate than in *malacus*, relatively wider, being fully a fifth wider than the prothorax; striæ finer and feebler, those toward the suture and the scutellar notably more impressed and with more convex intervals; puncture very small but regular and adjoining the second stria a little behind apical fourth; accessory abdominal punctures small, rather few in number, situated near the apices of the segments and bearing rather fine setæ. Length (♂) 8.8 mm.; width 3.35 mm. Utah (Virgin River). A single example as in the preceding.....**illectus** n. sp.

Pronotum more or less strongly flattened or deplanate near the hind angles, the marginal gutter rather coarse anteriorly, rapidly expanding, nearly horizontal in plane and curving strongly inward posteriorly, disappearing on the flattened or very feebly convex, subalutaceous and impunctate latero-basal area near basal fourth or fifth. Body unusually small in size, oblong-suboval, convex, castaneo-testaceous, moderately shining, the elytra (♀) opaque, much duller than in any other species in this part of the group; head rather small, with prominent eyes as usual, the foveæ minute, perforato-punctiform and lying within feeble elongate-oval impressions; mandibles very short, the incurved apex of the left sharply pointed; antennæ rather slender, more than attaining the thoracic base; prothorax fully one-half wider than long, the sides of the base strongly posteriorly oblique, the angles right and only narrowly blunt at their tips; foveæ finely linear, feeble, short and impunctate, the stria fine, more or less abbreviated anteriorly; elytra short, oblong, parallel, a third longer than wide, nearly a fourth wider than the prothorax; sides parallel and distinctly arcuate, the striæ very fine, the intervals virtually flat; accessory punctures of the abdomen fine, moderately numerous and irregularly scattered. Length (♀)

6.3–7.0 mm.; width 2.4–2.7 mm. New Mexico (the locality unrecorded)..... **nugax** n. sp.

16—Species of the Pacific coast fauna, larger, more oval and convex, the elytra much wider than the prothorax and with strongly arcuate sides. Color piceous-black when mature, the under surface and legs pale red-brown, the antennæ slender and ferruginous; surface highly polished, the elytra (♀) slightly alutaceous, generally with the sutural angle not or only extremely minutely denticulate; head moderate, rather short, the eyes prominent as usual, the foveæ very small, deep, rounded and somewhat impressed; prothorax fully one-half wider than long, the sides subparallel, almost evenly rounded, the base but slightly wider than the apex, transverse, feebly bisinuate, the angles rather obtuse and notably broadly rounded; apex moderately sinuate, with rounded angles; surface steeply declivous anteriorly to the rather fine reflexed edge, the gutter expanding but slightly, inclined in plane and very feeble posteriorly, disappearing near basal third, finely punctulate throughout; basal regions not distinctly punctulate, the foveæ narrow, very feeble and with a few punctures; elytra only two-fifths longer than wide, nearly a fourth wider than the prothorax, the sinus very feeble though rather evident, the striæ (♂) fine and feebly impressed or (♀) very fine and shallow, with nearly flat intervals; accessory punctures of the abdomen rather strong and asperate, somewhat numerous, tending to transversely lineal arrangement near the apices of the segments; hind tarsi not very short, slender, the basal joint two-thirds as long as the fifth. Length (♂♀) 7.8–10.0 mm.; width 3.1–3.7 mm. Northern coast regions of California. Eleven examples... **albionicus** Mann.

Species of the Sonoran fauna, much smaller, narrower and more parallel in form, the elytra (♀) usually rather strongly denticulate at the sutural angles and almost as shining as in the male..... 17

17—Body more elongate and slender, the elytra fully one-half longer than wide, circularly rounded at apex; hind femora (♂) strongly swollen. Black, highly polished, the under surface more piceous-black, the legs short, uniformly dark rufous; head moderate, the eyes prominent, the foveæ minute and perforato-punctiform; mentum tooth strong, slender and subacute; antennæ slender, dusky rufous; prothorax subparallel, fully one-half wider than long, the sides broadly rounded, gradually less so posteriorly, the apex feebly sinuate, with broadly rounded angles and barely visibly narrower than the base, which is transverse, finely margined, very broadly and obsoletely bisinuate and with the angles but little more than right and distinctly rounded; surface with feeble transverse wavy lines, the rather fine marginal gutter curving inward and expanding though feeble posteriorly, vanishing at basal fourth, the foveæ short, sublinear, very feebly impressed and with a few rather coarse punctures, otherwise impunctate; elytra barely visibly wider than the prothorax, the sinus completely obsolete; striæ rather fine, feebly impressed, the intervals slightly convex, the puncture very small and feeble, near posterior fifth; accessory punctures fine, sparsely and very irregularly distributed; hind tarsi rather short but slender, the basal

joint short. Length (♂) 7.7 mm.; width 2.8 mm. New Mexico (Jemez Springs),—Woodgate..... **vacivus** n. sp.

Body less elongate, the elytra always less than one-half longer than wide and more obtuse at apex; hind femora (♂) only very moderately swollen, the legs similarly short and dark rufous throughout....18

18—Pronotal foveæ and entire latero-basal surface more or less strongly though not densely punctate. Upper surface black or piceous-black and highly polished throughout in both sexes, the under surface piceous-black to dark red-brown; antennæ and palpi slender and testaceous; head moderate, the eyes and foveæ as usual; mentum tooth strong and acute; prothorax as in the preceding, except that the basal sinuations are narrower, deeper and more abrupt and most of the basal region rugulose or punctate, the foveæ very distinct, the surface smoother otherwise and with the transversely wavy lines feebler or obsolete; elytra two-fifths (♂) to scarcely more than a third (♀) longer than wide, very slightly wider than the prothorax, the parallel sides but feebly arcuate, the sinus extremely faint, vestigial; striæ rather fine, feebly impressed, with slightly convex intervals, perfectly similar in the two sexes; accessory punctures fine, sparse and irregular; hind tarsi still slightly shorter and less slender than in *vacivus*, the fifth joint almost as long as the first two combined. Length (♂♀) 6.5–7.9 mm.; width 2.5–3.1 mm. Wyoming to Arizona. Nine examples. [*H. lucidus* Lec. nec Moraw.].

lustrans Csy.

Pronotal foveæ rather less punctured, the feebly convex surface thence to the sides generally without punctures or sometimes with a few that are very minute and inconspicuous; hind tarsi similarly very short, with the fifth joint subequal in length to the first two combined..19

19—Elytra very obtusely but evenly and subcircularly rounded at apex, the sinus obsolete, the antennæ slender and moderately long as usual.....20

Elytra each obliquely subtruncate at apex, without the usual discal puncture, the antennæ shorter than in any other species and less slender, the medial joints barely longer than wide.....21

20—Body oblong-suboval, convex, strongly shining, blackish-piceous, with rufous elytra, the under surface rufo-piceous throughout; head moderate, the foveæ extremely minute, the left mandible gradually acutely pointed and incurved apically; prothorax fully one-half wider than long, almost as in *lustrans* but with the apex scarcely at all sinuate and the lateral gutter barely at all broadening posteriorly, abruptly obsolete at basal fourth, the distinct foveæ and basal parts nearly similar but less rugulose and with only a few extremely minute sparse punctules laterally; elytra (♂) still shorter, barely a third longer than wide, relatively wider, a fifth wider than the prothorax, the parallel sides feebly arcuate; striæ rather fine but even, more impressed than in *lustrans*, the scutellar notably longer and stronger, the intervals convex, much more so apically than in that species; puncture very small and feeble, near apical fifth; accessory punctures rather fine but numerous, sparsely distributed over nearly the entire surface of the abdomen; legs very short, the hind tibiæ

a third longer than the femora, the tarsi two-thirds as long as the tibiæ. Length (♂) 7.5 mm.; width 2.8 mm. Arizona (probably southern).....**socors** n. sp.

Body oblong-suboval, rather broader and less convex than in *socors*, blackish-piceous to paler above, the elytra darker than the anterior parts, red-brown beneath; surface very shining, the elytra subsimilar in the sexes; head nearly as in *socors* but with rather less minute foveæ; prothorax similar throughout, except that the apex is more deeply sinuate and with the apical angles much more narrowly rounded and more anteriorly prominent; it is also relatively larger in size; elytra not more than a third longer than wide, slightly wider than the prothorax, parallel, with feebly arcuate sides, the humeri much more strongly denticulate, the striæ finer and less impressed, the scutellar similarly long and generally free, the intervals much less convex, the sutural angles strongly denticulate in both sexes; accessory punctures few in number and widely dispersed; femora not quite so short when compared with the tibiæ. Length (♂ ♀) 6.5–7.8 mm.; width 2.3–3.0 mm. New Mexico (Fort Wingate). Eight examples. [*H. ochropus* Kirby?].....**desertus** Lec.

21—Body rather broadly oblong-suboval, notably small, rather convex, strongly shining, blackish-piceous in color above and beneath; head very moderate, with very prominent eyes, the foveæ relatively strong, perforato-punctiform; antennæ obscure testaceous, coming far from attaining the thoracic base; mentum tooth strong, with the apex not acute but rounded; prothorax short, fully three-fifths wider than long, the sides almost evenly and distinctly rounded, only a little less so basally, the apex evidently but not deeply sinuate, with well rounded angles and barely at all narrower than the base, the latter subevenly transverse, finely margined, with obtuse and broadly rounded angles; surface almost evenly and broadly convex, the reflexed margin moderately fine, almost even from apex to base, the foveæ small, short, linear, feebly impressed and very indistinctly, sparsely punctulate; punctures elsewhere wanting, the stria rather distinct but biabbreviated; elytra barely a third longer than wide, only just visibly wider than the prothorax, the sides feebly arcuate, the humeri not denticulate; striæ fine, rather abrupt, the scutellar short and oblique; intervals virtually flat, the dorsal puncture completely obsolete, no vestige being discoverable on either elytron in the type; hind tarsi barely two-thirds as long as the tibiæ; accessory punctures numerous, markedly fine and irregularly distributed. Length (♂) 6.8 mm.; width 2.75 mm. Colorado (Salida),—Wickham.....**curticornis** n. sp.

22—Body oblong, subparallel, compact, very convex, highly polished throughout, rufo-piceous to nearly black, the legs and under surface pale and testaceous, the upper surface, especially the elytra, more or less strongly metallic green in lustre; head short, with prominent eyes, the mentum with a short broad and obtuse tooth, the antennæ rather short, not quite as long as the thoracic width; prothorax three-fifths wider than long, the sides subparallel, rounding and slightly converging anteriorly, parallel and broadly, just visibly sinuate

posteriorly, the angles right, sharp; base rectilinear, strongly margined, a little wider than the apex, which is feebly sinuate, with broadly rounded angles; surface very smooth, the reflexed sides very fine and equal from apex to base, impunctate, joining the strong marginal line of the base, the basal foveæ small, elongate, rather deep but impunctate, the median stria excessively fine; elytra short, less than one-half longer than wide, oblong, not evidently wider than the prothorax, very obtuse, the apex in posterior third conjointly circularly rounded, the sinus completely wanting, the edge being evenly arcuate; striæ rather strong, deeply impressed only suturally, the scutellar deep and joining the first, the lateral line of foveæ strong, not interrupted but widely spaced medially; surface with a strong setigerous puncture at the second stria before apical fourth; first three joints of the hind tarsi rapidly decreasing, the first much shorter than the fifth. Length (♂) 7.5–8.2 mm.; width 3.4–3.7 mm. Texas. . . . . **gravis** Lec.

Body oblong, strongly shining, much less convex than in *gravis* and deep black in color above and beneath, without trace of metallic coloration, the prosternum medially, trochanters, tibiæ and tarsi obscure rufous, the femora deep black; antennæ slender, attaining the thoracic base, the third and fourth joints partially blackish, the trophi testaceous; head less abbreviated, the eyes moderately prominent, the foveæ perforato-punctiform; mentum absolutely edentate, the sinus rectilinearly transverse at the bottom; prothorax one-half wider than long, the sides rounded anteriorly, very feebly converging and straight posteriorly to the angles, which are right and not rounded, the tips barely at all blunt; apex rather strongly sinuate, with moderately rounded angles, distinctly narrower than the transverse base; surface rather abruptly declivous anteriorly to the very fine reflexed edge, which expands but little posteriorly, finely punctulate and obsolete before basal fourth, the lineate foveæ deep, broadly impressed and rather densely punctate, the punctures extending sparsely and finely over the feebly convex area thence to the sides and internally almost to the middle; stria very fine; elytra a litttle less than one-half longer than wide, not evidently wider than the prothorax, very obtuse at apex, the sinus represented by a straighter part of the edge, the parallel sides feebly arcuate; striæ fine, the intervals almost flat, the puncture near apical fourth; hind tarsi as in *gravis*. Length (♂) 9.5 mm.; width 3.65 mm. California (Siskiyou Co.),—Koebele. . . . . **oppositus** n. sp.

23—Form oblong, moderately convex, shining, the elytra (♀) feebly alutaceous; color dark castaneous above, the under surface, legs and trophi pale reddish-brown; antennæ slender, more than attaining the thoracic base, dusky testaceous, the two basal joints paler and honey-yellow; head much smaller than in the two preceding though nearly three-fifths as wide as the prothorax, the eyes moderate, prominent, the foveæ minutely perforato-punctiform; mentum tooth evident but very broad at base and narrowly rounded at tip; prothorax one-half wider than long, much narrower than the elytra, the apex moderately sinuate, with well rounded angles and scarcely

more than two-thirds as wide as the base, which is transverse, finely margined and feebly bisinuate, the angles right and distinctly though not broadly rounded; surface broadly convex, the reflexed sides fine and nearly even from apex to base, the foveæ narrow, linear, feebly impressed and impunctate, the area thence to the sides almost continuing the convexity of the general surface and impunctate, the stria very fine and broadly biabbreviated; elytra relatively large, nearly one-half longer than wide, more than a fourth wider than the prothorax, parallel, with feebly arcuate sides and very obtuse apex, the sinus feeble but distinct; striæ fine, the scutellar unusually long, free, the intervals barely more than flat, the puncture distinct and at apical fourth; hind tarsi with the first two joints subequal, each distinctly shorter than the fifth; accessory punctures very few in number. Length (♀) 8.0 mm.; width 3.5 mm. Utah.

oblongus n. sp.

24—Body more narrowly oblong-oval than in the preceding, deep black, strongly shining, the under surface and legs black throughout, the anterior and middle tarsi (♂) blackish-piceous; antennæ slender, extending well behind the thoracic base, black, the two basal joints pale; palpi black with testaceous tip; head small, with rather small but prominent eyes, the foveæ small, perforato-punctiform; mandibles and labrum deep black, the former with a subapical rufous spot; mentum tooth distinct but short and very obtuse; prothorax nearly as in the preceding in general form, not quite one-half wider than long, the sides parallel and barely at all arcuate, rounding and converging moderately before the middle, the apex moderately sinuate, with not very broadly rounded angles and fully three-fourths as wide as the base, which is transverse, not evidently bisinuate, with the angles as in *oppositus;* surface feebly rugulose and alutaceous laterobasally but impunctate and without even a distinct trace of foveæ, the reflexed margins fine anteriorly, slightly dilated, bending inward, smooth and feeble posteriorly and obsolete near basal third, the puncture before the middle large and conspicuous, the stria very fine; elytra very nearly one-half longer than wide, only about a fifth wider than the prothorax, parallel, with feebly arcuate sides and obtusely rounded apex, the sinus very feeble though evident, the striæ fine, the scutellar long, the intervals flat; puncture behind apical fourth; accessory punctures small, tending to transversely lineate arrangement; hind tarsi very slender, the first three joints diminishing moderately, the first much shorter than the fifth. Length (♂) 7.3 mm.; width 2.75 mm. Colorado (Eldora).

sejunctus n. sp.

Body nearly as in the preceding but larger and broader, moderately convex, very deep black throughout, the tarsi and antennæ as in *sejunctus* in form and coloration; antennæ and palpi also similar, slender; head scarcely more than half as wide as the prothorax, it as well as the prothorax nearly as in *sejunctas* throughout, except that the reflexed edge of the latter is not evidently broader or modified posteriorly and that the foveæ are distinct, broadly though shallowly impressed, rugulose and finely punctulate; mentum tooth

strong; elytra scarcely less shining in the female than in the male, oblong, parallel, feebly arcuate at the sides and very obtuse at apex, slightly, to distinctly, less than one-half longer than wide and not quite a fifth wider than the prothorax, the sinus not deep though very distinct, striæ fine, the scutellar long, the intervals nearly flat, the puncture small, behind apical fourth; accessory punctures fine, numerous, arranged in a very uneven transverse line on each segment; hind tarsi nearly as in the preceding. Length (♂ ♀) 7.8–9.0 mm.; width 3.0–3.8 mm. Nevada (Reno). Ten examples, taken by the writer..... **renoicus** n. sp.

In regard to *albionicus*, Mannerheim states that the base of the prothorax is punctulate; this language could not apply to any of the rather numerous examples at hand, which, answering all the other described characters, seem to be correctly identified; it was surmised by LeConte that the type of *albionicus* might be merely an immature example of *cautus*, but this, according to the terms of the description, is not at all probable. The description of *funestus*, given above, is from the original.

A few species of the *fraternus* group are still unknown to me; these are described as follows from the original diagnoses.

H. clandestinus Lec.—Elongate, oblong-oval, piceous-brown; antennæ, palpi and legs rufo-testaceous; prothorax wider than long, the sides rounded in front, then nearly straight, but very feebly sinuate to the hind angles, which are rectangular, not at all rounded; base emarginate, the side margin more reflexed than usual, explanate and sparsely punctulate toward the base, the basal impressions narrow, slightly punctured; elytra not wider than the prothorax, the striæ deep, impunctured, the intervals slightly convex; dorsal puncture upon the third stria; outline oblique toward tip but not sinuate; abdomen with accessory setæ, the first segment punctured behind the coxæ. Length 8.5 mm. Colorado (Garland—8000 feet). A single male.

It is said to resemble *furtivus* but to differ in having the hind angles of the prothorax rectangular and not rounded. As indicated by the emarginate base of the prothorax, it should be placed in the *furtivus—nugax* section as arranged above, but it differs from any one of the species known to me by the unrounded thoracic angles.

H. stupidus Lec.—Oblong, suboval, convex, black; prothorax more than one-half wider than long, the sides finely margined, rounded anteriorly, nearly straight posteriorly and almost parallel, the hind angles right, slightly rounded, the basal foveæ not at all deep, the entire basal region punctulate; elytra with impunctate striæ, opaque in the female, the intervals slightly convex, the apices sinuate; antennæ and legs obscure ferruginous. Length 11.5 mm. Nebraska (near Fort Bridger).

It is said to have somewhat the appearance of *funestus*, which however has black legs and is otherwise quite different, it may be placed just after *funestus* in the table.

H. obesulus Lec.—Oblong-oval, slightly convex, black, shining; prothorax almost twice as wide as long, narrowed at apex, the margin not depressed; hind angles right, the base obsoletely bi-impressed [" utrinque obsolete biimpresso " in the original], slightly rugoso-punctulate; elytra a little wider than the prothorax, the apices obliquely sinuate, the striæ deeper posteriorly; intervals slightly convex, the third unipunctate; antennæ testaceous at base. Length 8.7 mm. Oregon. A single female example.

This species is now considered a synonym of *basilaris* Kirby, but how justly I have no way of knowing in the absence of authentically identified examples of Kirby's species, which comes from the far north, Lat. 54°, and has the elytra chestnut-black and the trochanters dark yellow—characters said by LeConte to be at variance with *obesulus*. I am thoroughly disposed to doubt the present synonymy and also doubt the synonymy of *desertus* Lec., with *ochropus* Kirby, as at present maintained; *desertus* is from a far more southern habitat.

H. varicornis Lec.—Oblong-oval, subdepressed, black, shining; head smooth, the foveæ punctiform, the frontal suture fine, scarcely distinct; palpi not truncate but subacute at apex; antennæ black, the first joint ferruginous; prothorax quadrate, rather short, twice as wide as the head, fully one-half wider than long, slightly narrowed anteriorly, the sides moderately rounded, the base rectilinearly truncate, the hind angles right, not rounded, feebly explanate; transverse impressions almost obsolete, the stria extremely fine, abbreviated anteriorly, the foveæ short and broad, almost contiguous medially, sharply separated from the explanate angles, not deep, very finely and sparsely punctate; elytra slightly sinuate near the apices, finely striate, the intervals feebly convex, the third posteriorly unipunctate, the scutellar stria long; legs black. Length 8.8 mm.; width 3.8 mm. Lake Superior.

Allied possibly to *sejunctus* and *renoicus* of the above table, in both of which species, however, the first two antennal joints are pale; it seems to differ conspicuously from either of them in the transversely and internally extended thoracic foveæ.

Group VIII (*spadiceus*).

There is but little to be said concerning this small group of two species, except that in general habitus it departs from any of

the others, because of the sides of the prothorax being straight or sinuate and rather notably convergent posteriorly in about basal half, so that the base is not wider than the apex, as is invariably the case throughout the *viduus* group, to which it is allied by the pronotal features, glabrous upper surface of all the tarsi and absence of accessory abdominal setæ. In *spadiceus* the mentum has a small but distinct tooth and the ligula is narrow, subparallel and not dilated at apex. The species are as follows:

Form rather narrowly elongate-suboval, moderately convex, shining in both sexes, the elytra not at all alutaceous in the female; color black above, the under surface rufo-piceous, the legs dark rufous, the slender antennæ and the palpi testaceous; head nearly three-fourths as wide as the prothorax, with very moderate and rather prominent eyes and small perforato-punctiform foveæ; antennæ extending well behind the thoracic base; prothorax relatively moderate in size, longer than usual, not quite a third wider than long, the sides rounded anteriorly, converging and straight posteriorly, the angles obtuse, with their tips narrowly rounded; apex feebly sinuate, with rather narrowly rounded angles and fully equal in width to the base, which is transverse and finely, strongly margined; surface steeply declivous at the sides to the rather fine reflexed edge, which is virtually even throughout the length, the foveæ sublinear but extremely feeble and broadly subimpressed, finely and sparsely punctured, the minute punctules scattered also over the feebly convex surface thence to the sides, the stria very fine but subentire; elytra about one-half longer than wide and a fifth wider than the prothorax, obtusely ogival at apex, with parallel, distinctly arcuate sides, the sinus feeble though distinct, the sutural angles obtuse; striæ fine but deeply impressed, the scutellar moderate, the intervals distinctly convex, the puncture large and deep, near apical third; hind tarsi not very slender, the first three joints decreasing rather rapidly, the first as long as the fifth. Length (♀) 9.5 mm.; width 3.6 mm. A single example unlabeled in the Levette collection, probably from Indiana. **spadiceus** Dej.

Form and size as in *spadiceus*, with similar prothorax, except that the sides before the hind angles are sinuate, the angles rather rectangular and not rounded, the basal impressions of the prothorax deeper and more elongate; femora and tibiæ blackish, the tarsi, antennæ and palpi rufo-testaceous. Otherwise as in *spadiceus*. Length 9–9.5 mm. North Carolina (Black Mts.).....**carolinæ** Schf.

Carolinæ seems to be distinct from *spadiceus*, though we have only the very brief résumé of differences given above to rely upon; it is probably very local in habitat; *spadiceus* is rather widely diffused in the Atlantic regions but is not at all common.

There are several species described as *Harpalus*, which I am

unable to place anywhere in the series; these are as follows from the original descriptions:

H. comis Hald.—Shining black above and upon the under surface of the head and prothorax, chestnut brown beneath; antennæ, palpi and legs yellow testaceous; head with a small round indentation at the inner base of the antennæ; pronotum widest before the middle, contracted behind, with the angles slightly obtuse; basal impressions shallow, somewhat rugulose; dorsal impressions distinct; lateral margin testaceous; elytra simply striate, slightly sinuate, the margin rufo-piceous toward tip; interstices rather flat, the third with a faint puncture. Length 8 mm.; width 3 mm. Pennsylvania.

At first LeConte (Cat. Col., Sm. Inst.) thought that this might be the same as *spadiceus* Dej., but he afterwards concluded that *Ophonus mutabilis* Hald., was the same as the latter, leaving *comis* unidentified. I do not know of any late reference to the species.

H. curtatus Mann.—Rather short in form, parallel, black and shining, the palpi short; antennæ and legs rufo-ferruginous; prothorax very short and transverse, twice as wide as long, smooth, the sides evenly and moderately rounded; all the angles rounded, the base foveolate at each side, the foveæ impunctate; elytra striate, the third interval impunctate. Length 7.5 mm.; width 2.3 mm. Alaska (Kenai Peninsula—Woskresensk Bay).

The antennæ are said to be only half as long as the head and prothorax combined. It is evidently a peculiar species, of unusually small size and may not be truly a *Harpalus*.

H. depressicollis Mots.—Elongate, subparallel, somewhat depressed, black, the two basal joints of the antennæ, the palpi and tarsi testaceous, the labrum and epistoma margined with testaceous, the front with a rufous spot; head rather short, with a transverse impression between the antennæ and two minute diverging grooves, which limit at each side a triangular cavity, which is somewhat rugose; prothorax slightly broader than the head, depressed, quadrate, rather broadly margined at the sides and feebly narrowed posteriorly; there is at each side of the base a shallow impression, which is covered, like the rest of the basal region, with a fine close punctuation, which diminishes gradually toward the middle; elytra broader than the prothorax and more than twice as long, opaque, the second stria unipunctate, the under surface and epipleura dullish black. Length (♀) 9.0 mm.; width 3.3 mm. California.

This species evidently belongs to the genus *Anisodactylus*, for the red spot on the head is frequently observable there but never in *Harpalus*, and the pronotal sculpture also agrees better with that genus. I however fail to recognize it among my material; it is more slender in form than any true *Anisodactylus* known to me.

H. oodioides Chd.—About the size of *cautus* Dej., which it much resembles and it is similar in coloration; antennæ, palpi and tarsi dark ferruginous, the thighs browner; head slightly smaller, the prothorax less convex, more deeply sinuate at apex, a little more narrowed anteriorly, the posterior part of the sides somewhat less rounded, very feebly depressed above; base very slightly rugose, the basal foveæ narrower and longer; elytra less convex anteriorly but sloping more abruptly toward tip, less oval, parallel, the humeri more nearly right-angled and strongly denticulate; intervals flatter, very finely micro-reticulate in the male, the female unknown. Length 9 mm. "Terre de Rupert."

No remarks are appended to give any further clue to the true position of this species, which still remains unknown; it probably belongs among the small-headed species at the end of either the *viduus* or *fraternus* group.

Pteropalus n. gen.

A few species such as *Harpalus vulpeculus* Say and *dichrous* Dej. and *Feronia autumnalis* Say, have ever been a source of taxonomic discomfiture, being shifted from one genus to another until they have finally brought up in *Harpalus*, in spite of recognized incongruity. LeConte assigned them to *Bradycellus* and in truth *autumnalis* does form a genus near *Bradycellus*, but *vulpeculus* and *dichrous* must form a genus perhaps having really greater affinity with the Selenophorids than with *Harpalus*, for which the above name is suggested. The prismatic opalescence of the elytra is a peculiarity of importance, well developed also in many Selenophorid groups but unknown in *Harpalus*, and the apically expanded ligula and externally prolonged paraglossæ also show that these two aberrant species cannot remain in that genus. The slender hind tarsi, with a very long basal joint—a peculiarly constant character in the Selenophorini—also betray a wide departure from most of the genus *Harpalus*, though there are some species of the *pennsylvanicus* group approaching it very closely in this respect, except that the upper surface is there more or less pubescent, as it is in the Selenophorini. The mentum is more strongly and constantly toothed than in *Harpalus* and the general habitus of the body quite different. We apparently have the four following species:

Sides of the prothorax rather strongly converging and broadly sinuate posteriorly, the basal angles right and very sharply marked, not even blunt at tip. Body oblong-suboval and very moderately

convex, polished in both sexes, dark testaceous, the elytra black, with the opalescence feebler than in *dichrous*, the under surface, legs and cephalic appendages testaceous; head fully three-fifths as wide as the prothorax, the eyes well developed and convex, the foveæ larger than usual, deeply impressed and sublinear though short; antennæ rather long, very slender; prothorax more than one-half wider than long, the sides rounded anteriorly, the apex very feebly sinuate and as wide as the base, which is transverse and minutely beaded; surface only feebly convex, rather broadly reflexed at the sides, the gutter equal as far as basal third, where it disappears on the broadly flattened and strongly punctured latero-basal region, the foveæ moderately impressed and punctured, the area of punctures extending to the middle more basally; stria strong, almost entire; marginal puncture before the middle small and very inconspicuous; elytra one-half longer than wide, a third wider than the prothorax, with parallel and rather strongly arcuate sides and ogival apex, the sinus very feeble and almost obsolete; striæ fine but rather deeply impressed, the scutellar moderately long, free, the puncture small and at apical third; abdomen not evidently punctured basally; hind tarsi very slender, the basal joint but slightly longer than the next two combined. Length (♂ ♀) 9.0–10.0 mm.; width 3.35–3.7 mm. Indiana and Missouri. [*Harpalus vulpeculus* Say].

vulpeculus Say

Sides of the prothorax arcuate throughout, less so but only feebly converging basally, the hind angles obtuse and more or less broadly rounded; prothorax larger than in the preceding.....2

2—Body oblong-oval or subparallel, moderately convex, strongly shining, dark testaceous throughout as in *vulpeculus*, the elytra black, with stronger opalescence than in that species; head not quite so short, the eyes rather smaller, the foveæ very much smaller, punctiform but lying in feeble impressions; antennæ rather long, very slender; prothorax not more than two-fifths wider than long, the broadly rounded sides almost even throughout, the apex feebly sinuate, with rather narrowly rounded angles and differing greatly from *vulpeculus* in being barely more than three-fourths as wide as the base, which is similarly transverse and finely beaded; surface nearly as in the preceding, except that the rather coarse marginal gutter bends inward, broadens, becomes feeble and disappears posteriorly; anterior transverse impression similarly rather distinct; elytra nearly three-fifths longer than wide, about a fifth wider than the prothorax, the parallel sides more feebly arcuate, the apex rather acutely ogival, with a feeble though evident sinus; striæ not very fine and deeply impressed, the scutellar very long, parallel and free, the intervals strongly convex, highly polished, very strongly opalescent and perfectly similar in the sexes, the puncture small but deep and much less posterior, being at about three-fifths; hind tarsi very slender, the basal joint a little longer than the next two combined. Length (♂ ♀) 10.0–10.7 mm.; width 3.8–4.1 mm. New York (Long Island) to Missouri. Ten examples. [*Harpalus dichrous* Dej.]. . **dichrous** Dej.

Body oblong, moderately convex, very shining throughout, the upper

surface black, the head and sides of the prothorax slightly rufescent, the under surface piceous, the legs and cephalic appendages pale testaceous; head as in *dichrous* but with still longer, very slender and filiform antennæ and only a little more than half as wide as the prothorax, which is much larger, fully as wide as the elytra, a little more than two-fifths wider than long, more inflated anteriorly and slightly more narrowed basally, the sides rounded, becoming feebly so basally; apex sinuate as in the preceding but with more broadly rounded angles and much less obviously narrower than the base, which is similar and with slightly obtuse and moderately rounded angles; surface nearly similar and with well marked, nearly entire stria and rather distinct anterior transverse impression, but with the sides still more coarsely reflexed, feebly punctulate, the deep gutter becoming obsolete near basal third on the rather flattened latero-basal surface, which is sparsely but somewhat strongly punctured from the sides almost to the middle and with two impressions, the regular foveæ deeper, more linear and more distinct than in *dichrous*, and, between each and the sides, another feeble discal impression; the punctures are much sparser and less conspicuous toward the sides than in the preceding; elytra nearly as in *dichrous* throughout, except that they are slightly more elongate and with the puncture at apical third; abdomen similarly smooth and almost punctureless, the basal joint of the hind tarsi not quite so long, being barely as long as the next two combined; mentum tooth rather narrow and strong but obtuse at tip. Length (♀) 11.0 mm.; width 4.1 mm. Missouri (St. Louis)..... **fluvialis** n. sp.

Body black, elytra iridescent; legs piceous, the antennæ and palpi pale; head narrower than the prothorax, impunctate, shining; prothorax about twice as wide as long, the sides evenly arcuate, the hind angles obtuse, rounded; basal impression rather deep and linear; surface shining, without punctuation, except a very few punctures between the basal impressions; elytra shining in both sexes and iridescent, the striæ deeply impressed, not punctate, the fovea distinct and on the second stria; intervals slightly convex; body beneath smooth, shining, the abdomen without accessory setæ, not punctulate basally; mentum with the sinus broadly arcuate at the bottom; anterior and middle tarsi (♂) dilated and biseriately squamulose. Length 11–11.5 mm. Texas (Brownsville)..... **iripennis** Schf.

The description of *iripennis* is drawn from the original, as I do not know the species in actuality; the prothorax is apparently much more transverse and the mentum tooth more obsolete than in the other species, but it seems to belong to the present genus; the basal joint of the hind tarsi is not described. In a strong light an almost complete solar spectrum is displayed on the elytra of *dichrous*, where the strigilation producing the play of color is rather stronger than in the others, although it is very distinct and characteristic in all of them.

Tribe SELENOPHORINI.

In this tribe each elytron invariably has three series of setigerous punctures or foveæ, usually closely adjacent to striæ 2–5–7, as in *Philodes* of the Acupalpini; I know of no instance where there are less than three series; in the Acupalpini, however, there is a genus having but one series and in *Stenomorphus* there are two series on each elytron; the mentum is usually edentate and the ligula slender. The genera known to me may be defined as follows:

Basal joint of the hind tarsi notably long as in *Pteropalus* of the Harpalini; lateral line of elytral foveæ always widely interrupted.....2

Basal joint short, as in most species of *Harpalus*, the basal joints diminishing slowly in length; lateral line of foveæ not interrupted.....9

2—Middle tibiæ (♂) not arcuate, the anterior tarsi always and the intermediate generally though not always dilated—as for example in *Selenophorus riparius*.....3

Middle tibiæ (♂) always arcuate, with its inner margin serratulo-denticulate.....8

3—Basal joint of the anterior tarsi not peculiarly modified.....4

Basal joint greatly enlarged, especially in the female, as noticeable also as a reversional character in some of the Anisodactylini (*Gynandrotarsus*).....7

4—Hind tarsi very slender, nearly as long as the tibiæ and always with fine sparse hairs on the upper surface; dorsal surface of the body more or less depressed as a rule.....5

Hind tarsi always much shorter than the tibiæ, the abbreviation of joints 2–4 generally especially apparent, their upper surface usually more closely and evidently puberulent.....6

5—Body oblong-oval, the elytra frequently opalescent and sometimes with fine sparse diffused punctulation; never opaque in the female; ligula slender, generally a little shorter than the paraglossæ, which are rather broad and obliquely subtruncate at tip; labial palpi usually somewhat stout, with the second and third joints equal in length. North and South America. [Type *Selenophorus opalinus* Lec.].....**Hemisopalus**

Body oval or elliptical, with *Celia*-like habitus; ligula slightly shorter than the paraglossæ, which are long and slightly diverging; third palpal joint a little shorter than the second. Atlantic and Gulf coasts of North America.....**Celiamorphus**

6—Body *Harpalus*-like in habitus, generally strongly convex; prothorax never cordiform, the base never narrower than the apex; elytra with the series of punctures usually regular and adherent to the striæ, as in the two preceding genera, rarely if ever opalescent, the scutellar stria distinct; ligula about as long as the paraglossæ, which diverge slightly at apex; second and third joints of the labial palpi slender and subequal in length, the third gradually acuminate. North and South America. [Type *Carabus palliatus* Fabr. (*impressus* Dej.)].
Selenophorus

Body of peculiar facies, depressed, the prothorax strongly cordiform, with the base very much narrower than the apex; elytra with the series of punctures very irregular, generally not adjacent to the striæ, the scutellar stria very feeble or obsolete; ligula very slender, distinctly shorter than the paraglossæ; labial palpi slender, the second and third joints subequal in length, the third rapidly acuminate at tip. Sonoran regions..... **Selenalius**

7—Body nearly as in *Discoderus* but with less developed head and prothorax, the latter more cordiform than in any species of that genus. Atlantic regions..... **Gynandropus**

8—Body oblong-oval, convex, the anterior and middle tarsi (♂) not appreciably dilated, though having beneath a double series of very small squamules; integuments always dark in color. North America, excepting the true Pacific faunal regions..... **Discoderus**

9—Body oblong-oval and convex as in *Discoderus*, but with the anterior and middle tarsi (♂) strongly dilated and biseriately squamulose beneath as usual, the middle tibiæ not modified; integuments peculiarly pallid though dense as in *Geopinus*. Mississippi River Valley..... **Hartonymus**

Hemisopalus n. gen.

In this genus, which will include a considerable proportion of the species previously placed in *Selenophorus* by Putzeys, LeConte, Bates and others, we occasionally observe fine punctures pervading the entire elytra, but they never have the character so notably developed in *Athrostictus* Bates. The species at present in my collection may be defined as follows:

Hind angles of the prothorax rounded..... 2

Hind angles not obviously rounded, though sometimes very obtuse... 8

2—Elytra with strong and very evident prismatic iridescence..... 3

Elytra without pronounced iridescence, though very shining and sometimes with submetallic lustre; upper surface much more convex.. 6

3—Larger species 7–10 mm. in length, elytra with more or less sparse but obvious suffused punctulation throughout..... 4

Small species, not over 6 mm. in length and of very depressed form, the suffused punctulation obsolete..... 5

4—Form oblong, very moderately convex, black, polished in both sexes throughout, the margins of the pronotum finely testaceous and the elytra with obvious iridescence, the under surface black, with feeble metallic glint; legs and cephalic appendages pale testaceous; head rather short, with well developed and prominent eyes, the foveæ extremely minute and feeble, the antennæ very slender; prothorax one-half wider than long, the sides subparallel, evenly and moderately arcuate, the apex sinuate, with rather advanced though rounded angles and much narrower than the base, which is transverse and finely margined, with obtuse and evidently rounded angles; surface

rather finely and subevenly reflexed at the sides from apex to base, the latero-basal region feebly flattened and with moderately distinct suffused punctuation, the foveæ nearly obsolete; stria fine, much abbreviated anteriorly; elytra one-half longer than wide, oblong, parallel, with feebly arcuate sides, very obtusely rounded in about apical third and but very slightly wider than the prothorax, the sinus long and feeble but very evident; surface somewhat depressed, the striæ rather fine, the scutellar rather short, free, the intervals flat to distinctly convex, the fine punctures sparsely but evenly distributed throughout, the serial punctures more or less distinct; abdomen with very minute sparse punctulation which is obsolete laterally and more evident basally; hind tarsi very slender, with the basal joint but little longer than the next two and almost twice as long as the fifth, their upper surface with very fine sparse pubiferous punctures throughout. Length (♂♀) 9.0–10.5 mm.; width 3.4–3.7 mm. New Jersey to Indiana. [*Selenophorus opalinus* Lec.]

opalinus Lec.

Form more oblong-oval, the anterior parts smaller, the surface still more feebly convex, shining, black, the elytra only very faintly iridescent, the under surface black to rufo-piceous; legs, antennæ and palpi very pale, flavo-testaceous; head two-thirds as wide as the prothorax, the eyes (♂) notably large and prominent, much larger than in *opalinus*, the foveæ very minute, sublinear and feeble; prothorax two-fifths to one-half wider than long, the outline somewhat as in the preceding, except that the sides are more strongly, subevenly rounded, the apex more nearly as wide as the base and the hind angles more broadly rounded; surface with similar rather fine even reflexed edges from apex to base, but with the basal, lateral and apical regions punctured rather closely throughout, very finely toward apex, the foveæ very broad and shallow, the stria strong and subentire; elytra nearly as in *opalinus* but relatively wider, being very distinctly wider than the prothorax, with the apices very oblique, broadly, evenly arcuate to the acute apices and without trace of sinus, the surface suffused throughout with fine but rather close-set and very much more obvious punctulation; very slender hind tarsi with the basal joint much longer than the next two combined; abdomen extremely minutely, sparsely punctulate almost throughout. Length (♂♀) 7.6–9.0 mm.; width 2.9–3.5 mm. Texas (Brownsville and vicinity). [*Selenophorus perpolitus* Csy.].

perpolitus Csy.

5—Form broadly suboblong, the head, prothorax and elytra increasing evenly and rapidly in width, shining, black, the fine pronotal reflexed margin testaceous; under surface more piceous, the epipleura brownish; legs, antennæ, labrum and palpi pale yellowish-testaceous; elytra with pronounced opalescence; head fully three-fourths as wide as the prothorax, with rather large but only moderately convex eyes, the foveæ subobsolete; antennæ slender, fully half as long as the body; prothorax fully one-half wider than long, widest a little before the middle, the sides subevenly and rather strongly arcuate; apex distinctly sinuate, with rather advanced and narrowly

rounded angles, slightly narrower than the base, which is very finely margined, transverse medially but arcuate laterally, the angles broadly obtuse and rounded; surface feebly convex, the fine lateral reflexed edge equal throughout, the latero-basal area feebly depressed, finely, closely punctate, the foveæ short, shallow and broadly impressed; stria strong, biabbreviated; elytra short, about a third longer than wide, parallel, depressed, very obtuse at apex, much wider than the prothorax, the sinus rather short and distinct, deeper than usual; striæ fine, the scutellar rather short, only feebly oblique, the series distinct, the intervals flat, the polished surface exhibiting somewhat the appearance of having minute sparse punctulation which has become obsolete; tibiæ and tarsi slender. Length (♂) 6.1 mm.; width 2.5 mm. Florida (Lake Worth).

depressulus n. sp.

Form not so broad but depressed and otherwise nearly similar in coloration, lustre and proportion of the parts, the elytra rather more brilliantly opalescent; head not so short in form, the eyes relatively even still larger, the antennæ similarly long and slightly more slender, the labrum darker; prothorax shorter, fully three-fifths wider than long, the apex similarly rather strongly sinuate and barely visibly narrower than the base, which is more rectilinear throughout, not arcuate at the sides and with the angles similarly broadly obtuse and rounded; sides similar; surface rather more flattened over the latero-basal thickly punctured area, but with the foveæ obsolete, the distinct median stria similar; elytra less broad, about two-fifths longer than wide, much less obviously broader than the prothorax, similarly parallel and obtuse at apex, the sinus distinct; striæ fine but more impressed, the intervals slightly convex, smoother and still more polished and without any indication of minute suffused punctulation; abdomen excessively minutely, sparsely punctulate, each punctule bearing an extremely short erect hair, only visible by oblique illumination; hind tarsi rather less elongate than in *depressulus* though similar in structure. Length (♂) 5.5 mm.; width 2.0 mm. Florida (locality and collector unrecorded).....**vigilans** n. sp.

6—Color deep black throughout, the reflexed thoracic edge not paler, the legs piceous-black. Body oblong, rather strongly convex, highly polished, the elytra with feeble blue-black lustre; head moderate, three-fifths as wide as the prothorax, the eyes moderate, not very convex, the foveæ obsolescent as usual, the very slender antennæ and the palpi testaceous; prothorax rather long, subparallel, scarcely a third wider than long, the sides broadly and evenly arcuate; apex deeply sinuate, with prominent and rather narrowly rounded angles and much narrower than the base, which is transverse and distinctly margined, the angles nearly right but distinctly rounded; surface with a very fine even reflexed edge throughout, the lateral surface evenly convex and impunctate from apex to base, the foveæ rather large but extremely feeble and with a few distinct punctures; median stria very fine but almost entire; elytra not evidently wider than the prothorax, nearly one-half longer than wide, obtusely ogival at tip, the sinus broad and feeble but evident; striæ fine but rather deep,

the scutellar moderately short, deep, the intervals feebly convex, the series distinct; abdomen with a few very sparse and excessively fine punctules basally only; hind tarsi four-fifths as long as the tibiæ, the claws small, strongly arcuate and very slender. Length (♀) 7.0–7.2 mm.; width 2.7–2.75 mm. Rhode Island and New York (West Point), apparently not common. [*Selenophorus gagatinus* Dej., *S. maurus* Hald. and *S. viridescens* Lec.]. . . . . **gagatinus** Dej.

Color black or piceous, the antennæ and tarsi paler, the prothorax and elytra with greenish lustre. Body rather elongate; head smooth, without evident punctuation; prothorax rather convex, about twice as wide as long, the sides evenly arcuate; base and apex equal, the basal angles broadly rounded; surface and basal impressions impunctate; elytra wider than the prothorax at base, the sides almost parallel, the apices feebly sinuate; striæ rather deeply impressed, the intervals feebly convex; abdomen very sparsely punctate; middle tibiæ of the male straight, not internally denticulate, the anterior and middle tarsi dilated and biseriately squamulose beneath. Length 6.5–7 mm. Texas (Brownsville). [*Selenophorus discoderoides* Schf.]. **discoderoides** Schf.

Color testaceous above, with the elytra black or blackish. 7

7—Body oblong, convex, smooth and shining, the elytra piceous-black, with paler external margins and with extremely feeble opalescent lustre due to the transverse elongation of the micro-reticulation; under surface piceous, the legs and antennæ testaceous; head two-thirds as wide as the prothorax, with rather prominent moderate eyes, the foveæ very minute, perforato-punctiform; prothorax shorter than in *gagatinus*, two-fifths wider than long, the sides broadly rounded, somewhat straighter basally, the apex nearly as in the preceding and evidently narrower than the base, the basal angles obtuse and well rounded; surface rather more depressed laterobasally than in *gagatinus* and with sparse, extremely minute punctulation, becoming rugose in the moderate and very shallow, broadly impressed foveæ; stria extremely fine; elytra broader, two-fifths longer than wide and nearly a fourth wider than the prothorax, obtuse at apex, the sinus very feeble though rather evident; striæ very fine, the intervals perfectly flat but becoming rather abruptly very narrow and costuliform on the apical declivity; abdomen extremely minutely, sparsely punctulate basally. Length (♀) 6.7 mm.; width 2.7 mm. Arizona. [*Selenophorus concinnus* Schf.]. A single example, collected by Morrison, was given another name by the writer and the label marked "type" about thirty years ago, but no description appears to have been published. . . . . **concinnus** Schf.

Body oblong-suboval, less convex, strongly shining, the elytra very polished and black throughout, without evident metallic coloration, the under surface anteriorly testaceous, of the hind body black, the legs and very slender antennæ testaceous; head very moderate, only a little more than half as wide as the prothorax, the eyes moderate, the foveæ minute and perforato-punctiform; prothorax very nearly one-half wider than long, the parallel sides subevenly and moderately rounded throughout, with the edge finely reflexed; apex as in *gaga-*

tinus but with the angles scarcely at all rounded and nearly right, barely three-fourths as wide as the base, which is transverse and only very finely margined, the angles slightly obtuse and broadly rounded; surface very smooth, with vitreous lustre and only feebly convex, completely impunctate, excepting a few excessively minute punctules at the lateral margin and scattered sparsely over the broad and extremely shallow foveæ; stria very fine, only visible in median half of the length; elytra very nearly one-half longer than wide, not very obviously wider than the prothorax, parallel, with feebly arcuate sides and obtusely ogival apex, the sinus wide and very feeble; striæ fine, the scutellar distinct, the series having numerous punctures—about twelve on the fifth stria,—the intervals not quite flat and narrow but not very strongly convex on the declivity; hind tarsi very slender. Length (♀) 7.0 mm.; width 2.9 mm. Mexico (Durango City),—Wickham. Evidently allied to *semirufus* Bates, but differing in the subimpunctate pronotum and very shining elytra..... ***dichromatus** n. sp.

8—Sides of the prothorax sinuate posteriorly, the angles right and very acutely defined, not in the least blunt. Body subdepressed, oblong, shining, deep black, the thoracic margins not at all paler, the elytra polished and with feeble opalescence; under surface blackish-piceous, the legs, antennæ and trophi testaceous; head large, four-fifths as wide as the prothorax, with very prominent and rather large eyes and very minute punctiform foveæ, the antennæ slender and rather long; prothorax one-half wider than long, the sides rounded anteriorly, oblique posteriorly, very finely reflexed throughout; apex broadly, evenly and feebly sinuate, with narrowly rounded but scarcely advanced angles and barely visibly narrower than the base, which is transverse medially, feebly arcuate laterally; surface feebly convex, the latero-basal region scarcely at all flattened, finely, rather closely punctate, the foveæ moderate and very feebly impressed, the stria very fine; elytra parallel, with but very feebly arcuate sides and obtuse apex, two-fifths longer than wide and nearly a fourth wider than the prothorax, the sinus extremely feeble; surface smooth, polished and punctureless, except the apical slope which is punctulate and minutely pubescent; striæ fine, the scutellar moderate, scarcely at all oblique, the series distinct, each with about six small punctures; intervals virtually flat; abdomen very minutely and sparsely punctulate and minutely pubescent almost throughout; hind tarsi long and very slender. Length (♀) 5.4 mm.; width 2.0 mm. Texas (Brownsville),—Snow..... **angulatus** n. sp.

Sides of the prothorax oblique but not sinuate posteriorly, the hind angles obtuse..... 9

9—Form oblong, depressed, shining, black, the thoracic side margins not paler, the under surface red-brown, the legs and long slender antennæ pale testaceous; elytra with feeble opalescence; head large and rather short, more than three-fourths as wide as the prothorax, the eyes large and convex, less prominent in the female; foveæ excessively minute; prothorax very transverse, two-thirds wider than long, the sides strongly rounded anteriorly, oblique and virtually

straight in more than basal half; apex deeply sinuate, with the angles advanced and somewhat narrowly rounded, about as wide as the base, which is broadly sinuate medially, the angles very obtuse, not sharply marked and generally somewhat blunt; surface depressed, with very finely reflexed margin, the foveæ broad, extremely feeble and with suffused fine and rather close punctuation, which does not extend to the sides, the stria short and fine; elytra two-fifths longer than wide, parallel, with broadly arcuate sides and obtuse apex, a fifth to fourth wider than the prothorax, rather depressed, the sinus short and very distinct; surface throughout with a suggestion of obsolete sparse punctulation, the punctures however not visible even apically; striæ fine, the scutellar rather long, the series feeble, of about five minute punctures each; hind tarsi very slender, nearly as long as the tibiæ (♂), evidently shorter (♀). Length (♂ ♀) 5.3–5.4 mm.; width 2.2–2.25 mm. Florida (Lake Worth),—Kinzel. **delumbis** n. sp.

Form elongate-oblong, black, shining; prothorax not much wider than the head, shorter than wide, narrowed posteriorly, the hind angles obtuse, not at all rounded, the lateral margins piceous; foveæ very vague, punctulate; elytra iridescent, slightly wider than the prothorax, the striæ deep, coarser at apex, the second with 6–8 small punctures, the fifth with 3–4, the punctures not very distinct; antennæ, palpi and legs testaceous. Length 6.5 mm. Louisiana. "Allied to *iricolor* but smaller and narrower, with the hind angles of the prothorax not at all rounded and the base each side strongly punctulate." ..... **subtinctus** Lec.

The descriptions of *discoderoides* and *subtinctus* are drawn from the originals; the latter is evidently allied to *delumbis* but differs in several characters besides size, as may be noted by comparing the descriptions. The following species does not seem to be represented in my collection:

H. iripennis Say (*Harpalus*)—Body black, dark piceous beneath, the antennæ, labrum, mouth and legs rufo-testaceous, the latter paler; prothorax somewhat wider than long, widest in the middle, hardly narrower at base than at tip, the lateral edge piceous, almost regularly arcuated, the angles obtusely rounded, the basal edge rectilinear; dorsal and basal lines obsolete; base with numerous slight punctures; elytra blackish, with blue and iridescent reflections. Length 6.2 mm. Locality not given.

It is said by LeConte that *Selenophorus varicolor* Lec., is identical; it is described as follows:

Oblong, black, very shining; head smooth, the impressions almost wanting, the mouth, antennæ, palpi and legs rufo-testaceous; prothorax half wider than long, subquadrate, feebly emarginate at apex, the sides strongly rounded, feebly converging posteriorly, the hind angles obtuse,

broadly rounded, the base very feebly emarginate; surface almost flat, the transverse impressions almost wanting, the stria extremely fine, entire, the foveæ broad, very shallow, finely punctate; elytra slightly wider than the prothorax, parallel, rounded behind, with viridi-cyaneous reflections, striate, the scutellar stria long and distinct; intervals nearly flat, the series inconspicuous, the marginal series broadly interrupted at the middle. Length 6.5 mm.; width 2.7 mm. Pennsylvania and Georgia.

From this evidence I think there can be no doubt that *varicolor* Lec., is truly a synonym of *iripennis* Say, and *depressulus* of the above table is evidently closely allied, but, as the thoracic stria is by no means entire, the size somewhat smaller, the apical elytral sinus probably deeper and the geographic habitat quite different—at the same time considering the multiplication of allied species in the warmer parts of the country,—I am disposed to leave it as announced for the present. The matter seems to be settled in favor of this course by Dr. Horn, who states (Proc. Am. Phil. Soc., 1880, p. 182) that in *iripennis* the hind angles of the prothorax are distinct but obtuse and that there are a few fine punctures in the vague basal impressions, and further that the elytra are scarcely sinuate. In *depressulus* the hind angles are broadly rounded, the punctuation of the latero-basal parts distinctly dense and the elytral sinus deeper and more obvious than in any other species.

Celiamorphus n. gen.

Although not differing by any decisive structural characters from the preceding or from *Selenophorus*, it seems fitting to separate the small elliptical subdepressed species allied to *ellipticus* Dej., as a distinct genus, because of their different habitus and opaque integuments, at least in the female, these sexual differences being unknown apparently in either of those genera. The prosternal process is narrow, horizontal and very strongly margined throughout, and the hind tarsi are very long. The species are comparatively few in number and rather closely allied among themselves. By the descriptions of Dejean I am unable to separate the *granarius* and *pulicarius* of that author from his *ellipticus* and so have arbitrarily affixed these names to a rather inharmonious series taken in the Atlantic region, whence the types of that author probably came. There are, however, some other forms that seem to be distinct and I would arrange them as follows:

Elytra rather abruptly somewhat wider than the prothorax. Somewhat shining black, more opaque in the female; legs piceous; palpi blackish-brown, testaceous at apex; antennæ obscure brown, with the basal joint testaceous; form oblong-oval, rather depressed; head rather small; prothorax subtrapeziform, slightly rounded at the sides, wider than long and almost flat, impunctate, the foveæ very feeble, longitudinal; apex rather strongly sinuate; elytra rather short, somewhat strongly sinuate at the apices, the striæ fine; punctures of the three series very fine. Length 6.0 mm.; width 2.7 mm. Southern Atlantic states. Apparently rare. [*Selenophorus ovalis* Dej.]. . . . . **ovalis** Dej.

Elytra not or but very little wider than the prothorax. 2

2—Punctures of the three elytral series notably strong and conspicuous, the upper surface rather more convex than in the following species. Body oblong-oval, rather shining (♂), not very deep black above, the elytra with slightly greenish lustre, the legs and under surface piceous-black, the epipleura slightly paler; head short, not quite three-fifths as wide as the prothorax, the eyes well developed and moderately convex; antennæ slender, piceo-testaceous, the basal joint paler; prothorax a little more than one-half wider than long, the sides subevenly and not strongly arcuate, feebly converging anteriorly from near the base; apex strongly sinuate, not three-fourths as wide as the rectilinear and very finely margined base, the basal angles right, with their apices rather well defined and only very finely blunt; surface somewhat feebly convex, very finely reflexed at the sides, the margin a little more broadly subdeplanate posteriorly, impunctate, the foveæ finely linear, very feeble and impuncate; elytra two-fifths longer than wide, gradually rounded at apex, the sinus short and extremely feeble, vestigial; striæ very fine, the scutellar extremely faint, moderately short; intervals nearly flat. Length (♂) 5.3 mm.; width 2.2 mm. Florida. [*Selenophorus fossulatus* Dej.]. . . . . **fossulatus** Dej.

Punctures of the three elytral series very fine though always distinct; upper surface rather feebly convex. 3

3—Upper surface rather densely opaculate in both sexes, scarcely more so in the female than in the male. Body unusually elongate, suboval, deep black, without trace of metallic coloration, the under surface black, with slightly paler epipleura, the legs pale testaceous throughout; antennæ brownish-testaceous, with the basal joint pale, very slender and filiform, extending well behind the thoracic base; palpi testaceous, the last joint blackish with pale apex; head small, barely half as wide as the prothorax, the eyes moderate, prominent, the foveæ very minute but distinct; prothorax nearly two-thirds wider than long, the sides subevenly and rather strongly arcuate, converging from near the base, the apex narrow, deeply sinuate, with right and scarcely rounded projecting angles and barely more than two-thirds as wide as the base, which is transverse, just visibly posteriorly oblique for a short distance at the sides and extremely finely margined, the angles right with their tips very narrowly but obviously rounded; surface as in the preceding,

though only very feebly shining, extensively opaculate basally and with the foveæ obsolete; elytra oblong-oval, gradually rounding behind, more than two-fifths longer than wide (♂), a little shorter (♀), the sinus extremely feeble, obsolete in the female as a rule; striæ very fine, the scutellar still finer but rather long, the intervals flat, with sericeo-opaque lustre; hind tarsi (♂) evidently longer than the tibiæ, or (♀) equal in length to the latter, the setæ along the external edge of the tibiæ few in number but very thick and subspiniform. Length (♂♀) 5.9–6.1 mm.; width 2.35–2.5 mm. New Jersey (Atlantic City). Five examples..... **opaculus** n. sp.

Upper surface shining and feebly alutaceous in the male, sericeo-opaque in the female..... 4

4—Sides of the prothorax very moderately arcuate, parallel at base, thence converging to the apex as in the preceding..... 5

Sides of the prothorax more strongly arcuate, perceptibly converging toward the basal angles..... 6

5—Body oblong-oval, shorter and relatively broader than in *opaculus;* coloration throughout similar but rather less intense black, the two basal joints of the antennæ paler; head and antennæ similar; eyes very moderate in size and prominence; prothorax similar in general character but shorter, the apex rather less deeply sinuate and with somewhat less advanced angles, a little wider, being three-fourths as wide as the base, the latter rectilinear throughout, not posteriorly oblique at the sides; surface nearly similar, the foveæ obsolete; elytra much shorter, a third to fourth longer than wide, the sinus very feeble though somewhat evident in both sexes, the elytra less opaque and with more bronzy lustre as a rule, the striæ very fine, the scutellar very fine and extremely short as a rule, never as long as in the preceding; hind tarsi (♂) very slender, about as long as the tibiæ, or (♀) a little shorter. Length (♂♀) 5.2–5.7 mm.; width 2.1–2.6 mm. New York City to Illinois and southward to Texas and northern Mexico. [*Selenophorus ellipticus* Dej. (♂); *pulicarius* Dej. (♀) and *granarius* Dej.]..... **ellipticus** Dej.

Body slightly narrower and more elongate-oval; coloration and lustre nearly as in *ellipticus*, the very slender antennæ, however, with the three basal joints paler; head similarly small and only half as wide as the prothorax, but less transverse and with notably larger eyes, these being separated by not more than three times their own length; prothorax similar in general form and sculpture but slightly more narrowed apically, the apex deeply sinuate and only two-thirds as wide as the base, the foveæ similarly obsolete; elytra more elongate, two-fifths longer than wide, shining (♂) though similarly with very faint alutaceous lustre, the striæ slightly less fine and notably coarser on the posterior declivity than in *ellipticus*, the scutellar deeper and longer; hind tarsi extremely slender, as long as the tibiæ. Length (♂) 5.1–5.7 mm.; width 2.0–2.3 mm. New York (Catskill Mts.) and Rhode Island..... **currens** n. sp.

Body stout but very small in size, elliptic, moderately convex, shining, feebly alutaceous, piceous-black above and beneath, the latero-basal parts of the prothorax somewhat pallescent diaphanously; elytra

deeper black but with distinct æneous lustre; legs piceo-testaceous; head four-sevenths as wide as the prothorax, the eyes well developed and prominent; antennæ slender, fuscous, paler basally, extending behind the thoracic base; prothorax four-fifths wider than long, the sides almost evenly rounded, parallel basally, gradually converging apically; apex deeply sinuate, three-fourths as wide as the base, which is rectilinearly transverse; surface nearly even, without punctures or foveæ, the median stria distinct but only present medially; elytra a third longer than wide, parallel, with slightly arcuate sides and very little wider than the prothorax, evenly rounded in about apical two-fifths, the sinus very feeble; striæ very fine, the scutellar short and oblique; intervals flat; anterior tarsi (♂) short, distinctly dilated, the intermediate long, feebly dilated, the posterior very long and slender, rather longer than the tibiæ. Length (♂) 4.3 mm.; width 1.75 mm. North Carolina (Southern Pines),—Manee.

contractus n. sp.

6—Form rather narrowly oblong-oval, deep black, strongly shining (♂), rufo-piceous beneath, with paler epipleura, the legs testaceous; antennæ very slender, pale testaceous throughout, the palpi with the usual coloration as in *opaculus;* head short, subtransverse, slightly more than half as wide as the prothorax, the foveæ excessively minute; eyes rather well developed and separated by but little more than three times their length; prothorax fully three-fifths wider than long, the sides gradually more converging anteriorly, the apex deeply sinuate, rather more than two-thirds as wide as the base, which is just visibly sinuate, the angles right, with their apices very narrowly blunt; surface smooth, rather more steeply declivous anteriorly at the sides to the fine reflexed edge than in the preceding species, the edge rather more horizontal but less broadly expanding posteriorly, though similarly disappearing near basal third or fourth; foveæ not wholly obsolete as in the four preceding but broadly lineiform and evident, though short and very feeble; elytra a third to two-fifths longer than wide, gradually rounding behind from near the middle, the sinus barely traceable and vestigial, the striæ fine, coarser apically as usual, the scutellar short and extremely feeble; intervals flat. Length (♂) 5.0–5.6 mm.; width 1.8–2.2 mm. Texas (Galveston). Five examples.....**adjunctus** n. sp.

The above characters of *ovalis* Dej., are selected from the rather diffuse original description; it is said by Horn that the surface lustre is slightly iridescent, but I hardly think this term can apply to such iridescence as is observed in the preceding genus, and it is not alluded to by Dejean in his description.

Selenophorus Dej.

As a group of the Selenophorids, this genus is well distinguished from either of the preceding by the much more convex form of the

body, with prevalence of cupreous or æneous lustre and in the much shorter hind tarsi; this is particularly noticeable in the more typical forms, such as *palliatus* Fabr., where the tarsi become very much stouter than usual, with joints 2–4 much abbreviated and together but little longer than the first joint; although in smaller forms, such as *fatuus*, the tarsi become slender, they are always distinctly shorter than the tibiæ. The prosternal process more resembles that of *Hemisopalus*, being broader than in the preceding genus, less horizontal and not margined. The upper surface, so far as known to me, never becomes suffusedly punctulate as in many species of *Hemisopalus*, or opaque in either sex as in *Celiamorphus*. The species are rather numerous, those at present in my collection being as follows:

Larger species, never under 6 mm. in length.....2
Small species, with about 6 mm. as their superior limit of length; scutellar stria short and generally feeble.....6
2—Foveæ of the three elytral series large and very conspicuous.....3
Foveæ small, nearly as in the succeeding small species of the genus....5
3—Body stout, very convex, oblong, shining, with strong greenish-æneous reflection throughout above, piceous-black and without metallic lustre beneath, the legs short and stout, testaceous; head rather large, more than three-fifths as wide as the prothorax, with well developed prominent eyes and distinct deep sublinear foveæ; antennæ slender, obscure testaceous, gradually paler basally, the palpi testaceous; prothorax large, subparallel, only about two-fifths wider than long, rounded at the sides, which become straight and barely converging behind the middle, the apex feebly sinuate and much narrower than the base, the latter broadly and distinctly sinuate medially, with the angles scarcely more than right and narrowly blunt at their tips; surface evenly convex, very finely, evenly reflexed at the sides, impunctate, the foveæ broadly sublinear but extremely feeble, the stria fine but subentire; elytra oblong, not quite one-half longer than wide, the apices strongly oblique but not sinuate, the tips acute, equal in width to the prothorax; striæ very fine, the scutellar fine, moderately long, the intervals flat, the surface near the posterior part of the sides and the apex with suffused punctures, bearing very short hairs; abdomen minutely, sparsely punctulate and with very short hairs. Length (♀) 8.8 mm.; width 3.5 mm. Cuba (Havana).....***pyritosus** Dej.
Body narrower, smaller and less convex, with shorter prothorax.....4
4—Form oblong, somewhat strongly convex, black, with strong æneous-bronzy lustre above, the side edges of the pronotum pallescent; under surface piceo-rufous, the legs testaceous; head smaller, rather short, three-fifths as wide as the prothorax, with prominent eyes and with smaller and more punctiform foveæ, the antennæ slightly

shorter and less slender, pale brown, the two basal joints pale testaceous, the trophi testaceous; prothorax three-fifths wider than long, the sides moderately rounded anteriorly, very feebly converging and straighter in basal half, rather finely but strongly, evenly reflexed throughout; apex very feebly sinuate, distinctly narrower than the transverse, broadly and feebly bisinuate base, the flattened bead of which becomes finer laterally, the angles slightly more than right and distinctly though not very broadly rounded; surface impunctate, the foveæ large and broadly impressed, evident but shallow and impunctate; stria fine, distinct and subentire; elytra more than two-fifths longer than wide, slightly though evidently wider than the prothorax, ogival at apex, the sides parallel and broadly arcuate, the apices rounding, with indistinct or vestigial sinus, the tips not so acute as in the preceding, the surface finely, suffusedly punctate and minutely pubescent along the entire sides from base to apex; striæ fine, the intervals flat; abdomen minutely, sparsely punctulate and pubescent throughout; legs more slender than in *pyritosus*, the tibiæ with external setæ only in apical half. Length (♂ ♀) 7.0–8.8 mm.; width 2.9–3.4 mm. Gulf states. [*Harpalus stigmosus* Germ. and *S. impressus* Dej.]..... **palliatus** Fabr.

Form still narrower, smaller in size and similar in coloration and lustre, the elytral foveæ not quite so large and rather less numerous; head nearly two-thirds as wide as the prothorax, with prominent moderate eyes and small but deep, punctiform foveæ, the antennæ nearly similar; prothorax not quite so transverse, hardly one-half wider than long, nearly similar in form but with the sides basally more convergent, the angles being more obtuse though less rounded; base transverse, not evidently bisinuate and with the bead not evidently finer laterally, abruptly interrupted at the middle; apex sinuato-truncate, but little narrower than the base, the foveæ and reflexed edges nearly similar; elytra nearly similar throughout, the suture and edges posteriorly similarly testaceous; abdomen with the fine sparse punctulation broadly obsolete along the middle as a rule. Length (♂ ♀) 6.5–7.7 mm.; width 2.4–2.9 mm. Arizona (probably southern). Five examples..... **famulus** n. sp.

5—Oblong, stouter and a little more convex than in *palliatus*, the coloration similar throughout, except that the metallic lustre of the upper surface is more obscure and bronzy; head nearly similar but with rather more prominent eyes and with the foveæ prolonged in fine longitudinal furrows; prothorax as in *palliatus* throughout and with similar scattered punctures along the basal margin laterally but not quite so short, one-half wider than long; elytra similar but rather more elongate, almost one-half longer than wide, the striæ similarly very fine but with the foveæ of the three series having scarcely one-half the diameter and much less impressed; abdominal punctulation less fine, the punctures at the sides of the metasternum coarser and more numerous. Length (♀) 8.0 mm.; width 3.5 mm. Texas (Austin). [*Harpalus læsus* Lec.]..... **læsus** Lec.

6—Prothorax subparallel, not oblique at the sides posteriorly, the apex

always evidently, though not greatly, narrower than the base; apical sinus of the elytra wanting or extremely feeble.....7

Prothorax oblique at the sides posteriorly, much narrower than the elytra, the apex and base equal in width, the elytral sinus rather deep and distinct, its outer limit obtusely subprominent.....16

7—Elytra together almost evenly rounded at apex, the sinus wanting, the prothorax unusually short.....8

Elytra each oblique at apex, the margin either straight or just visibly sinuate, the prothorax less abbreviated, except in *maritimus*.....9

8—Body oblong, subparallel rather convex, strongly shining in both sexes, the upper surface black, with strong æneous lustre, piceous-black beneath, with paler epipleura, the legs obscure testaceous; head rather small, four-sevenths as wide as the prothorax, the eyes moderate, not very convex; antennæ slender, obscure, pale basally, nearly half as long as the body; prothorax fully three-fifths wider than long, the sides subevenly and rather strongly arcuate, finely and evenly reflexed, not narrowly deplanate; apex evenly and feebly sinuate, the base transverse, with the angles slightly obtuse through only somewhat blunt, not evidently rounded; surface evenly convex, very smooth, with extremely fine stria, the latero-basal regions slightly duller and feebly rugulose, the foveæ rounded, distinct though very feeble, somewhat more rugulose; elytra slightly wider than the prothorax, parallel, with only just visibly arcuate sides, which are more arcuate basally and broadly circularly rounded at apex, fully two-fifths longer than wide, the striæ extremely fine, feeble, the intervals perfectly flat, the three series distinct, the marginal interval and apex with very fine sparse punctules, generally in single line in the long medial interval of interruption of the line of foveæ; abdomen finely, sparsely but distinctly punctulate, the metasternum laterally with some very sparse and excessively fine punctulation; hind tarsi much shorter than the tibiæ, as usual in the genus, the first joint unusually long, exceeding the next three combined. Length (♂♀) 4.5–5.7 mm.; width 1.6–2.2 mm. Colorado (Boulder Co. and from an unrecorded locality). Twenty-one examples.....**planipennis** Lec.

Body oblong, smaller, broader in form; coloration and lustre throughout as in the preceding, the upper surface rather more obscurely bronzy; head nearly similar, the eyes somewhat smaller, the antennæ stouter, the intermediate joints, on the compressed side, not one-half longer than wide; prothorax similar but still shorter, fully two-thirds wider than long, the parallel sides evenly and still more strongly arcuate and very narrowly explanate along the fine reflexed margin, the stria excessively fine but becoming deep and strongly impressed just behind the centre in the type, the latero-basal regions opaculate and with a few rugulæ and fine scattered punctures, the foveæ feebler, almost completely obsolete; elytra much shorter, a third longer than wide, only just visibly wider than the prothorax, otherwise nearly as in the preceding throughout, the punctures of the three series minute and feeble but distinct on the smooth ground; abdomen with the sparse punctures very distinct; hind tarsi (♀)

shorter and more slender than in *planipennis* (♀), but with the first joint distinctly longer than the next three combined; lustre of the elytra very faintly subalutaceous and more evidently so than in the preceding. Length (♀) 5.2 mm.; width 2.0 mm. Arizona (southern). **otiosus** n. sp.

9—Prothorax very short, three-fourths wider than long, less in the male, the foveæ linear and rather deeply impressed. Form oblong, moderately convex, unusually highly polished throughout in both sexes, black, with dark greenish-æneous lustre above, the margins of the prothorax and the suture and margins of the elytra, posteriorly, pallescent; under surface blackish-rufopiceous, the epipleura pale; legs bright testaceous; head nearly two-thirds as wide as the prothorax, with moderate but very prominent eyes, the foveæ very minute, perforato-punctiform; antennæ very slender, obscure, paler basally; prothorax parallel, with subevenly and very moderately arcuate sides, the apex rather deeply sinuate; base transverse, rounding laterally, the angles slightly obtuse and notably broadly rounded; surface finely reflexed at the sides, smooth, the marginal flattening narrow but perceptible, the foveæ shallow, broadly impressed, impunctate though sometimes with very minute rugulosity; elytra two-fifths longer than wide, not distinctly wider than the prothorax, the obliquity of the apices feebly sinuate (♂), or straight (♀), the striæ extremely fine, the intervals flat, becoming narrow though scarcely convex suturally on the declivity; serial punctures distinct, the punctulation of the marginal interval and apex excessively minute; basal joint of the hind tarsi very long though but little longer than the next three in either sex; abdomen impunctate and very shining. Length (♂♀) 5.3–5.9 mm.; width 2.0–2.25 mm. Texas (Galveston)..... **maritimus** n. sp.

Prothorax generally less abbreviated, the foveæ more rounded and always very feeble or vague..... 10

10—Elytra subequal in width to the prothorax in both sexes..... 11

Elytra distinctly wider than the prothorax, though less obviously than in *fatuus* and *mustus*..... 14

11—Basal joint of the hind tarsi shorter than in the preceding but very nearly as long as the next three combined. Oblong, moderately convex, strongly shining and with bright æneo-cupreous lustre above, the under surface nearly black, with pale epipleura and legs throughout; head fully three-fifths as wide as the prothorax, with eyes moderate in size and prominence, the antennæ slender, fuscotestaceous; prothorax one-half wider than long, the subparallel sides almost evenly and moderately arcuate and rather finely reflexed; apex feebly sinuate, the transverse base finely beaded, with the angles broadly rounded; surface with rather sharply defined anterior transverse impression and very fine stria, the very faint and vague foveæ with numerous fine punctures basally; elytra two-fifths longer than wide, barely visibly wider than the prothorax, the apical obliquity straight; striæ fine but not so markedly so as in the three preceding, the scutellar rather long, the intervals nearly flat, barely convex on the declivity, the punctulation of the marginal

interval and the apex rather distinct, the punctures of the series fine but distinct; abdomen with very fine sparse punctulation. Length (♀) 5.3 mm.; width 2.0 mm. Texas (locality unrecorded). **cupreolus** n. sp.

Basal joint of the hind tarsi much shorter than the next three combined in both sexes 12

12—Upper surface with green or æneous-green metallic lustre, the prothorax much less transverse than usual and only about two-fifths wider than long. Body oblong-oval, more convex than usual, shining, the under surface blackish, with paler epipleura and legs; head well developed, about two-thirds as wide as the prothorax, the eyes moderate and not very convex, the antennæ piceous, paler at base; prothorax with subevenly and broadly arcuate sides, the apex feebly sinuate, narrower than the base, which is transverse medially, feebly arcuate laterally, with the angles rather broadly rounded; surface very convex, finely reflexed at the sides, with very fine stria and usually numerous fine feeble longitudinal folds at apex and base, the foveæ diffuse and very vague but with numerous punctures basally as a rule and with some also near the sides; elytra unusually short, a third longer than wide, very obtuse at apex, the striæ fine but distinct, the intervals nearly flat, becoming narrow and convex at apex, the marginal punctulation very fine and the scutellar stria distinct; abdomen with numerous extremely fine and feeble punctures. Length (♂) 5.1–5.7 mm.; width 2.0–2.35 mm. New Jersey ..... **troglodytes** Dej.

Upper surface with æneous to very obscure greenish lustre, the prothorax about one-half wider than long 13

13—The upper surface with bright æneo-cupreous lustre; under surface as in the preceding; tibiæ and tarsi sometimes a little more obscure than the femora; head moderate, the eyes not large, only moderately prominent; antennæ piceous, paler at base, not very long or slender; prothorax with parallel and feebly arcuate, rather finely reflexed sides and broadly, very moderately sinuate apex, the base somewhat as in the preceding and with rather broadly rounded angles; surface less convex and smoother, the very feeble and vague foveæ with only very few fine punctures and with a few also at the sides; elytra longer, more than two-fifths longer than wide, rather less obtuse at apex, the striæ fine but distinct, the scutellar rather well developed, the intervals flat to feebly convex, narrow but not very convex at apex, the series distinct, the marginal punctulation extremely fine, the apical much more evident; abdomen with fine and sparse punctures and usually rather distinct pubescence. Length (♂♀) 4.6–6.0 mm.; width 1.8–2.3 mm. Long Island, New Jersey and Virginia; also one example without label from the Levette collection. [*S. æreus* Lec. and *S. puellus* Putz. fide Horn] ..... **pedicularius** Dej.

The upper surface with bronzy-greenish lustre, shining, the under surface black, with pale epipleura and obscure rufous legs, the femora clearer; head fully three-fifths as wide as the prothorax, with moderate though rather prominent eyes; antennæ not very long or slender, nearly black, the basal joint pale; prothorax scarcely one-half wider

than long, with subparallel and more strongly arcuate sides; surface finely reflexed and feebly punctulate at the sides and with an excessively fine stria, only visible in median half, also with very numerous feeble longitudinal plicæ at apex and base and some transverse wavy lines discally, the foveæ extremely feeble and vague, with some very minute rugulosity and a few fine punctures; apex feebly sinuate, the basal angles rather broadly rounded; elytra nearly as in the preceding throughout, except that the punctures at the margin and apex are very much more distinct; abdomen (♂) more sparsely and finely puberulent but having, almost similarly, some remarkable modifications along the middle; the combined first and second segments, or the apparent first segment, has at base between the coxæ a minute and densely pubescent spot, and, near the apex, two similar and very approximate spots; the next two segments have each two slightly larger, transversely approximate and sharply limited medial opaque spots, of very dense pubescence; the last segment is without spots; the anterior tarsi are feebly, the middle not at all, dilated, the first joint of both without squamæ, the next three with two rows of very small squamules; hind tarsi very slender; in the male of *pedicularius* the middle tarsi are evidently though not strongly dilated. Length (♂) 5.7 mm.; width 2.1 mm. Mississippi (Vicksburg)..... **riparius** n. sp.

14—Head large, fully two-thirds as wide as the prothorax. Body oblong, rather convex, shining, obscure piceo-rufous, with black and rather shining though scarcely at all metallic elytra, the under surface anteriorly, epipleura and legs pale testaceous, the hind body nearly black; head with moderate but rather prominent eyes, the slender antennæ and palpi pale testaceous, the last joint of the latter obscure but with pale tip; prothorax rather more than one-half wider than long, the sides perceptibly more rounding anteriorly than posteriorly, with very finely, abruptly and evenly reflexed edge throughout; apex feebly sinuate, barely visibly narrower than the base, which is transverse, the angles only slightly more than right and but very narrowly rounded; surface with some fine transverse lines medially, otherwise smooth, the biabbreviated stria very fine, the foveæ almost completely obsolete but having each, before the base, a very short and sharply linear scratch; elytra almost one-half longer than wide, ogival in apical third, the obliquity perfectly straight suturally, only a little wider than the prothorax, the striæ very fine, the intervals not quite flat, very narrow and convex at apex, the marginal punctulation very fine, almost obsolete medially, the series distinct; abdominal punctures very fine, hind tarsi with the basal joint not quite as long as the next three. Length (♀) 5.8 mm.; width 2.2 mm. Colorado..... **scolopaceus** n. sp.

Head only moderately developed, about three-fifths as wide as the prothorax, the latter more distinctly narrower than the elytra..... 15

15—Form rather narrowly oblong-oval, convex, shining, black, the upper surface with cupreo-æneous to more obscure metallic lustre, the under surface shining black when mature, with the legs and epipleura obscure rufous; head nearly as long as wide, with moderate and rather

prominent eyes and slender fuscous antennæ, paler basally; prothorax nearly one-half wider than long, the sides parallel, evenly and very distinctly arcuate and finely reflexed; apex feebly sinuate, nearly as wide as the base, which is transverse medially, feebly arcuate at each side, the angles slightly obtuse and broadly rounded; surface nearly even, with a few very small punctures at the sides and lateral parts of the base, the foveæ very feebly impressed, not large and rather vague, the stria extremely fine; elytra fully two-fifths longer than wide, nearly a fifth wider than the prothorax, very obtuse at apex, the obliquity of which is straight; striæ nearly as in the preceding, the marginal and apical punctulation much closer and more distinct; abdomen with very fine sparse punctulation; basal joint of the hind tarsi a little shorter than the next three combined. Male with the anterior tarsi feebly, the middle not at all dilated, both squamulose beneath, the abdomen with the medial pubescent spots described in *riparius* but all so much reduced in size as to be discernable only under very close observation and with considerable optical enlargement. Length (♂ ♀) 4.5–5.8 mm.; width 1.7–2.2 mm. Texas (Austin).....**houstoni** n. sp.

Form distinctly stouter, the size a little larger, with bronze lustre, the structure otherwise almost as in *houstoni*, except that the pronotal foveæ are almost completely obsolete, the finely reflexed lateral margin testaceous and not virtually concolorous as it is in *houstoni*, the sides of the base less arcuate and the apical angles more broadly rounded; the elytra are relatively shorter, being only about a third longer than wide, the abdomen and legs nearly similar, the basal joint of the hind tarsi even more distinctly shorter than the next three combined. Length (♀) 5.6–6.2 mm.; width 1.9–2.4 mm. Louisiana (Alexandria). Three examples....**implicans** n. sp.

Form rather stout, nearly as in *implicans*, except that the prothorax is shorter and that the shining upper surface has a dim piceo-æneous lustre; coloration otherwise nearly similar; head similarly with the eyes very moderate in size, though rather prominent; prothorax fully one-half wider than long, with parallel, evenly and moderately rounded sides, the apex only very slightly sinuate, somewhat narrower than the base, which is transverse and not evidently arcuate at the sides, with the angles broadly rounded; surface very moderately convex and almost even, the foveæ extremely feeble and vague, usually having a few small punctures; elytra less than one-half longer than wide, evidently wider than the prothorax, obtuse at tip, the feebly defined obliquity straight, the striæ nearly as in the two preceding but with the scutellar rather more developed, the marginal and apical punctulation very fine and rather indistinct; tarsi nearly as in *houstoni;* abdomen (♂) perfectly even, minutely punctulate as usual but without trace of the small medial pubescent spots of the *pedicularius* section and still observable in greatly reduced condition in *houstoni;* basal joint of the hind tarsi about as long as the next three combined. Length (♂ ♀) 5.2–6.0 mm.; width 1.8–2.5 mm. Southern Arizona (Morrison) and also El Paso, Texas. Eight examples.....**æneopiceus** Csy.

16—Body oblong, the anterior parts much smaller relatively than in any of the preceding, shining black, the upper surface with very obscure bronzy lustre, the under surface rufo-piceous, the legs ferruginous; head fully three-fourths as wide as the prothorax, with very much larger eyes than usual, they being also very convex and prominent; antennæ very slender, dusky-testaceous; palpi dusky, slender, very finely acuminate at apex; prothorax short, fully two-thirds wider than long, widest and with rather strongly rounded sides before the middle; apex sinuato-truncate; base subtransverse, with the angles very obtuse though scarcely at all rounded, only narrowly blunt at their tips; surface rather finely but strongly reflexed but only slightly diaphanously paler at the sides, the transverse impressions very feeble though more or less evident, the stria excessively fine, the foveæ broadly diffuse and vague, barely at all impressed or punctulate, the latero-basal region rather flat; elytra relatively large, nearly one-half longer than wide and a third wider than the prothorax, parallel, obtuse at tip, the striæ very fine, the scutellar notably short and feeble, the intervals flat; punctures of the series very fine, not always accurately following the striæ, the marginal and apical punctulation almost obsolete; abdomen scarcely at all punctulate; hind tarsi extremely slender though distinctly shorter than the tibiæ, the basal joint slightly shorter than the next three combined. Length (♀) 4.5–6.0 mm.; width 1.75–2.4 mm. Texas (Brownsville). Six examples. The male would probably disclose some interesting sexual characters..... **fatuus** Lec.

Body rather less elongate, more strongly shining, black above, with bright though dark and slightly greenish æneous lustre, the under surface, legs and epipleura dusky rufous; head not quite three-fourths as wide as the prothorax, the eyes not so large as in *fatuus* though well developed, the antennæ very slender but not so long and blackish-piceous, with pale basal joint, the slender palpi blackish, with feebly pale tip; prothorax somewhat as in *fatuus* but still a little shorter, similarly strongly rounded at the sides and widest well before the middle, but with more finely reflexed and concolorous edges, the apex rather deeply sinuate, with prominent and barely at all rounded angles, the basal angles very obtuse and rather blunt though scarcely rounded; surface rather more convex, smooth and completely impunctate, the foveæ more deeply impressed, the surface thence to the sides feebly convex and not flat; elytra not so elongate, though more than two-fifths longer than wide, the striæ very fine and feebly impressed, the scutellar extremely short, the intervals not quite flat, the marginal and apical punctulation obsolete; punctures of the three series very much larger, more deeply impressed and conspicuous; hind tarsi shorter though slender, the basal joint not quite as long as the next three. Length (♀) 5.0 mm.; width 2.1 mm. Florida (Biscayne Bay),—Schwarz..... **mustus** n. sp.

The remarkable abdominal sexual characters of the *pedicularius* section, detailed above in describing *riparius*, do not seem to have

been observed hitherto; they are entirely wanting in *planipennis* and *maritimus*, very feeble in *houstoni* and again obsolete in *æneopiceus*, showing that these species are not so closely associable with *pedicularius* and *troglodytes* as formerly supposed. They were not discovered by the writer until the descriptions of the species given above had been long under way, and, as the species having like sexual characters happen to be brought into juxtaposition by use of other more general characters, it is not necessary to recast the table on that score. As another interesting fact, pointing toward *Discoderus*, it should be stated that in *riparius* the middle tarsi of the male are completely undilated and very slender, though bearing beneath the usual two series of squamules.

Beauvoisi Dej., is of a common Central American type and has occurred so far only in the West Indies. The following species is decidedly doubtful as to generic relationship, so far as published characters serve to show:

S. breviusculus Horn—Oval, slightly oblong, robust, piceous, the legs pale; surface feebly shining, with distinct bronze lustre; head punctulate, rugulose at the sides above the eyes; prothorax broad, the apex and base equal, the sides rather strongly arcuate; basal angles broadly rounded, the base feebly emarginate at the middle; surface convex, the sides slightly depressed posteriorly, more shining at the middle, finely, transversely wrinkled, in front finely punctulate, at base and sides densely punctate and opaque; elytra not wider than the prothorax, scarcely a third longer than wide, the sides moderately arcuate, the apex scarcely at all sinuate, moderately deeply but finely striate, the intervals flat and irregularly but finely, biseriately punctulate and pubescent; serial punctures very fine and indistinct; eighth stria distant from the margin; body beneath feebly shining, the abdomen sparsely punctate and with short pubescence; legs testaceous, the middle and posterior tibiæ slightly arcuate. Length 6.5 mm. Indian Territory (now Oklahoma),—Fort Cobb.

I have seen no representative of this species, but it is my opinion at present that it, together with *curvipes*, *arcuatus* and *crassiusculus*, should be separated as a distinct genus, coming between *Selenophorus* and *Discoderus*.

Selenalius n. gen.

The general habitus of this genus is quite distinct from that observable elsewhere in the Selenophorini, due to the peculiar shape of the prothorax, which recalls that of *Glanodes*. Presumably not

knowing the male, Dr. Horn placed the type species in *Discoderus*. The head is well developed, the mentum completely edentate as usual and the frontal foveæ more obvious than usual. The hind tarsi are short as in *Selenophorus*, but the basal joint is not quite so elongate, being scarcely longer than the next two joints combined. A rather singular character, partially presaged in *Selenophorus fatuus*, is the freedom of the punctures of the elytral series from the striæ; the punctures of the two inner series are but seldom in close contact with the striæ, though they are nearly normal and substrial in the outermost series; in *fatuus* it is the middle series that is notably erratic. My material seems to indicate two species as follows:

Form suboblong, rather elongate, very moderately convex, strongly shining, dark testaceous throughout, except the elytra, which are blackish-piceous and with scarcely visible greenish metallic lustre; head fully three-fourths as wide as the prothorax, with moderate though very prominent eyes, the foveæ small and deep, punctiform and lying within rather deep impressions; antennæ pale testaceous, slender and rather long; prothorax one-half wider than long, the sides strongly rounded anteriorly, becoming oblique and nearly straight thence to the base and finely though strongly, evenly reflexed throughout; base transverse, slightly arcuate laterally, with the angles very obtuse but evident though distinctly blunt, not three-fourths as wide as the apex, which is broadly and very feebly sinuate; surface with feeble transverse rugulæ, fine but distinct subentire stria and rather evident traces of irregular anterior and posterior transverse impressions, the foveæ moderate in size, deep toward base and with a few feeble sparse punctures; elytra one-half longer than wide, a third wider than the prothorax, nearly parallel, with feebly arcuate sides, widely basally exposed and non-denticulate humeri and obtusely ogival apex, the sinus obsolete; striæ fine but rather deep, the scutellar nearly obsolete, the intervals flat except at apex, the serial punctures small and feeble, the margins and apex distinctly and suffusedly punctulate; abdomen with very fine sparse punctures; anterior and middle tarsi (♂) rather strongly dilated, the two series of squamæ beneath conspicuous. Length (♂) 8.0 mm.; width 2.8 mm. Arizona (Tuçson). [*Discoderus cordicollis* Horn]..... **cordicollis** Horn

Form somewhat similar but smaller and rather narrower, more parallel, similarly feebly convex, very shining and piceous-black throughout above, without metallic lustre, the rather finely but strongly and evenly reflexed sides of the prothorax diaphanously paler; under surface and legs testaceous, the antennæ and trophi still paler; head not so large, similarly with very prominent moderate eyes and rather constricted neck, the foveæ rather large, irregular and very deep; antennæ nearly similar; prothorax slightly more than one-half

wider than long, almost similar in outline, except that the sides basally are less oblique and distinctly arcuate and that the basal angles are wholly obliterated, being very broadly rounded; the marginal bead of the base is much finer; otherwise it is nearly similar; elytra narrower, fully one-half longer than wide, nearly as in *cordicollis* but more evenly parabolically rounded at apex, with the humeri less broadly exposed basally and the striæ a little coarser and more impressed, with feebly convex intervals, especially suturally, the scutellar stria sometimes completely obsolete; abdomen similar; basal joint of the hind tarsi (♂) rather distinctly longer than the next two combined, the tarsus similarly much shorter than the tibia. Length (♂ ♀) 7.0–7.3 mm.; width 2.65 mm. Texas (El Paso),—Dunn..... **parilis** n. sp.

This genus seems to be confined to the Sonoran fauna and the species are probably rather local in distribution.

Gynandropus Dej.

The Anisodactylides of Lacordaire, to which group *Gynandropus* is referred by that author, are, as shown by knowledge of the present day, the receptacle of many discordant elements, of which the present genus is one of the most obscure in its relationships. It is true that the tarsal vestiture of the male is rather solid, but careful observation proves it to be seriately squamiform and not uniformly spongiose, and the fact that the female tarsi are also partially clothed beneath, together with the peculiar habitus of the body, shows that it cannot be closely associated with any other known genus. The large basal joint of the female anterior tarsi betrays at least some affinity with *Stenomorphus* and the general habitus of the body and presence of three series of setigerous elytral punctures indicates a relationship with *Selenophorus* and *Discoderus*.

In the male of *Gynandropus* both the anterior and middle tarsi are stout and densely clothed beneath, evenly throughout the length of the first four joints, with white squamiform vestiture in two absolutely contiguous series, so that the soles are uniformly clothed throughout, the texture of the squamæ transverse in structure. The basal joint is only moderately enlarged, the first four joints decreasing almost uniformly in size and nearly similar in form, the intermediate but little less stout than the anterior and otherwise similar. In the female the basal joint of the anterior tarsi is relatively very large, oblong-oval, much longer than the

next two joints combined and very much broader, almost as in *Stenomorphus*, though not nude beneath as in that genus; the middle tarsi are nearly like the anterior but less dilated throughout. The large basal joint of the anterior is broadly and feebly concave beneath and uniformly and densely clothed with very short slender squamæ; on the second joint these become longer and less dense, though similarly confused in arrangement, and on the third they become still longer, finer and criniform, sparse and with their apices apparently sensitive. The middle tarsi have the basal joint large but much less dilated than that of the anterior and more strongly squamose beneath, the squamæ more biseriately arranged, somewhat as in the male, though much less evidently so on joints two to four. It will be noted that these characters are most exceptional.

The two species known within our faunal limits may be described as follows:

Form elongate, polished, convex, deep black above, without trace of metallic lustre, piceo-rufous beneath, the legs, antennæ, labrum and oral organs pale testaceous; head nearly three-fourths as wide as the prothorax, with rather large and prominent eyes, the antennæ slender, filiform and extending far behind the thoracic base; labrum barely at all sinuate medially, with broadly rounded angles; frontal impressions small, deep and punctiform, nearly as in *Discoderus;* prothorax but very slightly wider than long, the apex and base subequal, truncate, the sides rounded, a little more converging basally, the angles very obtuse but not or scarcely rounded; base finely margined; side margins very finely reflexed; surface smooth and polished, more feebly declivous but scarcely explanate and with numerous coarsish punctures latero-basally, the foveæ shallow; median stria very fine, the transverse impressions shallow and very vague; elytra three-fifths longer than wide, fully a third wider than the prothorax and about three times as long, parallel, obtusely rounded at tip, the apices narrowly oblique though barely visibly sinuate; striæ rather fine but deeply and broadly impressed, the scutellar wholly wanting, the fovea however large and distinct, the striæ shallower and sometimes feebly punctulate laterally; intervals convex, especially suturad; setigerous punctures of striæ 2–5–7 obvious; lateral line of foveæ broadly interrupted; legs rather short and slender; basal joint of the hind tarsi much longer than the next two as in *Discoderus*. Length (♂ ♀) 6.0–7.0 mm.; width 2.2–2.5 mm. Rhode Island, New Jersey, Staten Island and Catskill Mts. [*G. americanus* Dej.; *Harpalus hylacis* Say]..... **hylacis** Say

Form narrower than in the preceding, black, shining; head, antennæ and palpi similar, the legs rufous; prothorax not shorter than wide, truncate at apex and base, the sides rounded, the hind angles slightly explanate, obtuse, somewhat rounded; surface convex, the transverse

impressions obsolete, the longitudinal stria fine, abbreviated at both ends, the basal foveæ small, punctate; elytra slightly wider than the prothorax, almost three times as long as wide, parallel, moderately rounded at tip, striate; striæ 2–5–7 with rather distinct series of punctures; intervals smooth, slightly convex. Length 6.2 mm.; width 1.8 mm. Georgia..... **elongatus** Lec.

The description of *elongatus* is taken from the original; it is said to be very rare; *hylacis* however, is frequently taken, although not very common. The head does not differ much sexually, but if anything is a trifle larger in the female than in the male.

Discoderus Lec.

The genus *Discoderus* is represented by numerous species throughout the temperate parts of North America but is wanting in the true Pacific coast fauna. The body is oblong, rather strongly convex as a rule, glabrous, the mental sinus edentate, the ligula rather short and narrow, the paraglossæ much exceeding it in length, wide, thick and rounded at their apices, the palpi normally slender, the second joint of the labial with about three long and several short setæ and equal in length to the third, making therefore somewhat of an approach to the second section of the subfamily in this respect. The frontal foveæ are very small and isolated, not linear, the mandibles and eyes moderate and the antennæ slender but not unusually long. The hind angles of the prothorax are invariably rounded, the elytral striæ more or less fine, the second, fifth and seventh with a series of small setigerous punctures, the outer series of foveæ broadly interrupted as a rule and the scutellar stria distinct. The two anterior tarsi of the male are scarcely at all dilated and have two series of minute inconspicuous squamules beneath. Our species, which are frequently closely allied among themselves, may be described as follows:

Prothorax more strongly transverse, nearly one-half wider than long. Form parallel, rather convex, shining, black, with subæneous or feeble viridi-æneous lustre, the under surface and legs blackish-piceous, the antennæ ferruginous; head nearly two-thirds as wide as the prothorax, the slender antennæ extending well behind the latter, which is parallel and evenly arcuate at the sides, with very broadly rounded basal angles, the base medially feebly bisinuate; surface with shallow subpunctiform basal foveæ, behind which and near the sides there are some evident punctures; basal stria entire, the margin thicker medially; median stria fine but distinct; elytra

three-fifths longer than wide, but very slightly wider than the prothorax and not quite three times as long, obtusely rounded at apex, the apical sinus very feeble; striæ rather fine but deep, the scutellar long but fine, the three series of punctures distinct, the foveæ of the lateral line broadly interrupted as usual; intervals not quite flat; legs moderate, the basal joint of the hind tarsi evidently longer than the next two; middle tibiæ (♂) only feebly arcuate and with the inner serratures fine. Length (♂ ♀) 7.2–9.0 mm.; width 2.5–3.3 mm. Texas (El Paso—the type locality), New Mexico (Las Vegas) and Arizona. Abundant. [*Harpalus impotens* Lec.]. . **impotens** Lec.

Prothorax always less transverse, often but very little wider than long. . 2

2—Sides of the prothorax behind the middle feebly converging and straight to the moderately rounded basal angles. Color deep and shining black above, the under surface, legs and antennæ dark rufous; surface convex; head short, fully two-thirds as wide as the prothorax, the eyes well developed and prominent; antennæ slender, moderate in length; prothorax two-fifths wider than long, the sides rounded anteriorly; base finely and deeply margined, transverse medially, rounded laterally; surface very narrowly and feebly subexplanate at the sides basally, the foveæ feeble and slightly punctured, the median stria very fine, almost obsolescent; elytra barely wider than the prothorax and two and one-half times as long, throughout nearly as in the preceding, except that the striæ are deeper, especially toward apex, and the intervals more convex, the scutellar stria longer and deeper, the apex less obtuse suturally, the sinus a little more evident; tarsi very slender, the basal joint of the posterior almost as long as the next three. Length (♀) 7.8 mm.; width 3.0 mm. Arizona (probably southern). . . **obsidianus** n. sp.

Sides of the prothorax parallel and broadly, subevenly arcuate throughout. 3

3—Body obscure rufous in color, paler beneath, the legs and antennæ still paler, ferruginous, the elytra black, with strong violet-blue lustre, shining; upper surface less convex than usual. Head small, barely half as wide as the prothorax, the eyes prominent, the antennæ slender, extending slightly behind the thoracic base; prothorax barely two-fifths wider than long, the parallel sides strongly arcuate, the basal angles broadly, the apical rather narrowly, rounded; basal margin very fine, the base just visibly and broadly sinuate laterally; surface broadly concave and evidently punctate latero-basally, somewhat reflexed basally at the sides, the fine median stria evident; elytra rather short, barely one-half longer than wide, less than two and one-half times as long as the prothorax and slightly wider, parallel, very obtusely rounded at tip, the sinus barely traceable; striæ rather strong and deep, the scutellar long, moderately deep, the intervals slightly convex, the setigerous punctures of the three series very fine; middle tibiæ (♂) but feebly arcuate, the graniform inner serrules distinct, rather close-set; tarsi slender, the basal joint of the posterior almost as long as the next three. Length (♂) 8.0 mm.; width 3.2 mm. Utah (Virgin River). . . . . **amœnus** Lec.

Body uniform in color above and generally deep black. 4

4—Body very stout in form and usually of rather large size, the basal thoracic angles broadly rounded.....5
Body much more slender and small in size, never so much as 10 mm. in length.....8
5—Prothorax about as wide at apex as at base.....6
Prothorax distinctly narrower at apex than at base.....7
6—Elytra broader than the prothorax (♀) or equal thereto (♂). Body stout, oblong, strongly convex, shining, black in color and without trace of metallic lustre; under surface and legs nearly black, sometimes slightly red-brown from immaturity; head not quite three-fifths as wide as the prothorax, the eyes relatively moderate in size and convexity; prothorax less than two-fifths wider than long, the sides almost evenly arcuate though gradually a little less so posteriorly than anteriorly, the base finely margined, broadly, feebly sinuate medially, the basal foveæ shallow but evident, feebly punctate, the surface narrowly and feebly subexplanate at the hind angles; elytra about twice as long as the prothorax, obtusely ogival at apex, the sinus very feeble; striæ rather coarse and deep, the scutellar rather long and strong, the intervals feebly convex, the setigerous punctures distinct; middle tibiæ (♂) moderately arcuate and granulo-serrate within; basal joint of the hind tarsi long as usual. Length (♂♀) 9.0–11.0 mm.; width 3.4–4.2 mm. Arizona (southern). Abundant. Ten examples.....**robustus** Horn
A—Similar but somewhat narrower, with a slightly smaller head and generally of a pale and uniform red-brown color, occasionally nearly black but always much paler beneath, the legs rufous; prothorax slightly narrower than the elytra in both sexes; middle tibiæ (♂) nearly similar, the hind tarsi slightly more slender. Length (♂♀) 9.0–11.5 mm.; width 3.4–3.9 mm. Arizona (near Benson),—Dunn. Abundant. Twelve examples...**piceus** n. subsp.
Elytra as wide as the prothorax, apparently in both sexes; size larger. Form robust, convex, piceous, shining, without trace of metallic surface lustre; antennæ, palpi and usually the labrum, castaneous; head impunctate, the frontal impressions very short; prothorax quadrate, slightly wider than long, somewhat narrowed at base, widest at one-third from the apex, the sides regularly arcuate, the margin not depressed; surface smooth, convex, the median impression faint and short, the basal impressions broad but shallow and vague; elytra not wider than the prothorax, the sides feebly arcuate, the surface convex, finely striate, the striæ impunctate, the intervals smooth, very feebly convex, the inner sides of 3, 6 and 8 with the usual punctures fine and rather indistinct; under surface slightly paler, shining; prosternum not margined at tip but with two usually conspicuous bristles on each side; abdomen very sparsely punctate, with coarser punctures on the intercoxal process, the last segment with two setæ on each side at tip. Length 12.5 mm. Arizona (southern).....**crassicollis** Horn
7—Body very stout and convex, deep black and somewhat alutaceous, without trace of metallic lustre; head deep black, with the labrum, palpi and antennæ castaneous-red, well developed, rather more than

three-fifths as wide as the prothorax, the eyes moderate as in the two preceding; prothorax between two-fifths and one-half wider than long, the parallel sides evenly and rather feebly arcuate, more so and converging anteriorly; base feebly sinuate and transverse in median half only, and not much more broadly as it is in *robustus* and *piceus*, finely margined throughout; surface very convex, rapidly declivous to the unusually pronounced marginal gutter but scarcely visibly and narrowly subexplanate about the broadly rounded hind angles; basal foveæ rather large and elongate, broadly impressed, indefinite and wholly impunctate; elytra twice as long as the prothorax and not wider, the apex very obtusely ogival, the sinus barely traceable; striæ rather fine, well impressed suturad, the scutellar distinct, the foveæ of the three series rather large and impressed; under surface and legs piceous-black, the legs rufescent. Length (♀) 10.8 mm.; width 4.3 mm. Arizona (southern).

pinguis Csy.

Body not quite so stout and decidedly less convex, highly oplished throughout, black, the upper surface with feeble violaceous lustre; under surface and legs rather pale red-brown, the antennæ, palpi, mandibles and labrum ferruginous; head rather small, but slightly more than half as wide as the prothorax, the frontal impressions very small, rounded and subperforate as usual; prothorax barely a third wider than long, as wide as the elytra, widest slightly before the middle, the sides subevenly and strongly arcuate throughout, the apical sinus very shallow, much feebler than in the preceding species; base finely margined, very feebly and evenly sinuate, except near the sides, where it becomes feebly arcuate; surface gradually declivous to the very fine marginal gutter, rather broadly deplanate basally between the shallow and indefinite, minutely and feebly punctulate foveæ and the sides, having a few longitudinal plicæ medially at base as in *crassicollis;* elytra barely more than twice as long as the prothorax, not very obtusely ogival at tip, the sinus virtually obsolete; striæ not very fine, abrupt and deep, the intervals nearly flat, the punctures of the series small; marginal interval, extending more inwardly toward tip, finely and sparsely punctate throughout, in a manner not evident in any of the preceding species, the marginal series of large foveæ widely interrupted as usual; middle tibiæ (♂) rather strongly arcuate and with the usual modification, the tarsi as usual. Length (♂) 10.0 mm.; width 3.9 mm. Arizona (near Benson),—Dunn. . . . . **subviolaceus** n. sp.

8—Prothorax not much narrowed anteriorly, the apex subequal in width to the base, the basal angles very broadly rounded. 9

Prothorax distinctly and arcuately narrowed anteriorly, the apex much narrower than the base, the basal angles more evident, rounded but less broadly so than in 9. 14

9—Size moderate, seldom at all less than 7 mm. in length. 10

Size notably small, never so much as 7 mm. in length. 13

10—Elytral striæ fine and feeble, the eighth very superficial and almost obsolete basally, the marginal interval without trace of fine confused punctures except apically. Body oblong, only moderately convex,

deep black above and beneath, without trace of metallic lustre at any part, the legs rufo-piceous, the antennæ ferruginous; head well developed, two-thirds as wide as the prothorax with unusually prominent eyes; prothorax more transverse than usual in this section, fully two-fifths wider than long, evenly and rather strongly rounded at the sides, the marginal groove fine; base broadly, feebly sinuate medially; surface gradually declivo-explanate toward the hind angles, the foveæ punctiform, impressed and near basal fourth, impunctate; elytra not distinctly wider than the prothorax, obtuse at apex, the apices oblique and subrectilinear; scutellar stria long; punctures of the three series strong and conspicuous but abrupt and not impressed; intervals flat, becoming narrow and convex on the apical slope as usual; middle tibiæ (♂) but feebly arcuate though distinctly granulo-serrate within, the tarsi as usual. Length (♂) 9.0 mm.; width 3.3 mm. Arizona (probably southern) ..... **symbolicus** n. sp.

Elytral striæ stronger and more impressed, the eighth notably coarse and deep throughout, the marginal interval with more or less evident fine confused punctures throughout, though becoming obsolescent or sparser along the interval of interruption of the series of foveæ. 11

11—Punctures of the marginal interval equally distinct in the interval of interruption of the foveæ but sparser than basally or apically, the short stiff hairs borne by these punctures more distinct and more broadly so at apex than in any other species. Body oblong-elongate, moderately convex, shining, black, the upper surface sometimes with feeble viridi-æneous lustre, especially in the female, the under surface, legs and labrum dark red-brown; palpi and antennæ paler; head nearly three-fourths as wide as the prothorax, the eyes prominent; prothorax two-fifths wider than long, parallel, the sides very moderately and subevenly rounded, the base feebly arcuate, scarcely traceably bisinuate; marginal gutter at the sides rather strong; surface feebly subexplanate toward the basal angles, more strongly in the male, with a few feeble punctures near the base, the foveæ subpunctiform, small, feeble and near basal sixth; elytra just visibly wider than the prothorax, the apical sinus almost obsolete, the punctures of the three series small but distinct; middle tibiæ (♂) strongly arcuate and with strong internal granulo-serration. Length (♂ ♀) 8.5–9.5 mm.; width 3.0–3.3 mm. Texas (locality unrecorded). **æqualis** n. sp.

Punctures of the marginal interval barely at all traceable in the medial interruption of the line of foveæ, distinct basally and apically, extending to adacent intervals in the latter case; surface more strongly convex than in either of the two preceding, the form more cylindric, the elytral striæ coarser and still more deeply impressed than in *æqualis* 12

12—Form subcylindric, shining, black, the upper surface with strong greenish metallic lustre, especially on the elytra; under surface nearly black, the legs and epipleura obscure rufous; antennæ, labrum and palpi paler; head rather more than two-thirds as wide as the prothorax, with rather large and prominent eyes; prothorax

unusually long, barely a fourth wider than long, parallel, with evenly and moderately rounded sides, the apical angles broadly, the basal very broadly, rounded, the apical sinus rather shallow; base transverse, arcuate laterally, the sinuses barely traceable; surface very steeply declivous at the sides to the fine gutter, except basally, where it is unusually widely and abruptly explanate, the foveæ very feeble and vague, with a few feeble punctures basally; elytra barely visibly wider than the prothorax and a little more than twice as long, the striæ deep, the intervals slightly convex, the punctures of the three series small, the fourth puncture of the inner series at some distance from the stria on both elytra in the type; apical diffused punctures numerous and distinct, the oblique sinus very feeble; middle tibiæ (♂) moderately arcuate and with strong separated inner granules and thick outer spiniform hairs; tarsi as usual. Length (♂) 7.9 mm.; width 3.0 mm. Texas (Austin). A single example taken by the writer. . . . . **longicollis** n. sp.

Form subcylindric but not quite so stout, shining, deep black above, without metallic lustre, except a feeble viridi-æneous tinge near the hind thoracic angles, which becomes abruptly strong on the marginal interval of the elytra; under surface and epipleura, except basally, black, the legs, median parts of the prosternum and gula feebly rufescent, the anterior parts of the head as in the preceding; antennæ pale; head fully two-thirds as wide as the prothorax, the latter two-fifths wider than long, otherwise nearly as in the preceding, except that the surface is very feebly and gradually subexplanate posteroexternally, with the foveæ still more completely obsolete; elytra equal in width to the prothorax and nearly two and one-half times as long, obtusely ogival at apex, the sinus barely traceable and short; striæ fine but well impressed, the three series very even throughout, the punctures small but unusually numerous, about ten in number on the second stria; diffused punctuation at tip very fine and barely evident; middle tibiæ (♂) rather feebly arcuate, the inner serrules few in number and widely spaced. Length (♂) 7.2 mm.; width 2.6 mm. Arizona (probably southern). . **congruens** n. sp.

13—Closely related to *parallelus* Hald., black, shining; head smooth, the frontal impressions punctiform; labrum, antennæ and palpi ferruginous; prothorax slightly shorter than wide, slightly emarginate at apex, the sides rounded, the hind angles obtuse and rounded, the base very feebly bisinuate; surface subconvex, rugose, the margin toward the hind angles feebly explanate, sometimes feebly punctate, the longitudinal stria abbreviated anteriorly, distinct; anterior transverse impression occasionally somewhat distinct, arcuate, the basal wanting; elytra not sinuate at apex, deeply striate, more so toward tip, the scutellar stria long and distinct; intervals moderately convex, with the usual series, the marginal series of foveæ widely interrupted; legs piceous-black, the tibiæ and tarsi less obscure. Length 6.5 mm.; width 2.5 mm. Rocky Mountains. [Piceous; surface without metallic lustre; legs somewhat paler; antennæ testaceous; prothorax equally wide at base and apex, the side margin

not depressed. Length 5.5 mm. New Mexico—Horn (Bull. Bk. VI, p. 52)]..... **tenebrosus** Lec.

14—Body deep black, moderately shining, the under surface and femora black, the tibiæ and tarsi obscure rufous; head (♂) evidently more than half as wide as the prothorax, the eyes moderately large and prominent; prothorax scarcely more than a third wider than long, rounded on the sides and gradually narrowed anteriorly from behind the middle, the apex feebly sinuate and four-fifths as wide as the base, the apical angles but slightly rounded; surface distinctly explanate near the hind angles and with fine punctures near the base, the foveæ subobsolete; elytra one-half longer than wide, the side margins with a feeble prominence at basal fifth, the apical sinus barely traceable, nearly obsolete; surface rather coarsely and deeply striate, with moderate strial foveæ and somewhat convex intervals. Female with the head only scarcely visibly larger than in the male, the prothorax distinctly shorter when compared with the elytra than in that sex. Length (♂ ♀) 6.3–6.8 mm.; width 2.5–2.7 mm. New Jersey (Atlantic city), and Virginia, westward to Iowa (Keokuk). [*Selenophorus parallelus* Hald.; *Pangus americanus* Mots.]

parallelus Hald.

Body and legs nearly similar throughout to the preceding, but somewhat narrower, less convex and with a smaller head, the elytra not quite one-half longer than wide, though twice as long as the prothorax, the latter a little shorter than in *parallelus*, less explanate postero-externally and with the anterior angles much more broadly rounded, the hind angles generally less broadly rounded; elytra nearly similar, but with a less visible protuberance at the sides near the base and with the apical sinus more completely obsolete. Length (♂ ♀) 5.2–6.4 mm.; width 1.8–2.4 mm. Kansas, Texas and Colorado (Boulder).

hesperus n. sp.

The species named *parallelus* Hald., above, is the one usually identified as *Selenophorus parallelus* of that author, but the original description (Pr. Acad. Phila., I, 1843, p. 301) does not agree very well; this is as follows:

Lengthened oval, black, shining; antennæ, palpi, tibiæ and tarsi rufous; femora darker or chestnut; head glabrous; posterior impressions of the pronotum slight and minutely rugose; elytra slightly sinuate, striate; striæ alternately obsoletely punctured, a row of about 6 punctures upon the inner edge of the 3d insterstice. 8 mill. long. Larger and narrower in comparison than *S. ellipticus*, with the sides of the elytra more nearly parallel and the abbreviated stria near the scutel more distinct.

No locality is given under the descripton, but, as the species is listed in a catalogue of the Coleoptera of southeastern Pennsylvania, preceding in the same paper, it is to be assumed that the species is from that region. The length is materially greater than

that of any Atlantic coast form of *Discoderus* known to me, and the sinus of the elytra could hardly be described even as slight; it is the merest vestige, which would be unobservable unless looked for very sharply.

In Bull. Mosc. 1859, p. 137, Motschulsky describes a *Pangus americanus*, which is evidently a *Discoderus* and it is correctly assigned to that genus in the Munich catalogue. The type was given to the describer by Dupont, as coming from California, but, as the genus *Discoderus* does not seem to occur in California, the Dupont specimen was in all probability incorrectly labeled and might have been from almost any other locality in North America. As Motschulsky's description fits *parallelus* very well, I think there can be no lack of propriety in assigning it as a synonym of that species as proposed above.

Horn describes the prothorax of *robustus* (Bull. Bk. Ent. Soc., VI, p. 52) as being "distinctly narrower at base than at apex," which could only be the result of an optical illusion; the prothorax is, if anything, a little wider at base than at apex, though the two are very nearly equal, as stated in the table. *Pinguis* Csy., which was united with *robustus* by Dr. Horn, is a very different species, having the prothorax notably narrowed at apex and with the formation of the basal margin and the extent of its medial sinuation altogether at variance with the corresponding characters in *robustus*. *Piceus*, of the table, is held to have a value at least subspecific, because of the differences stated, which are quite apparent in series; *robustus* seems to be much more constantly deep black above and piceous-black beneath. The presence of fine suffused setigerous punctuation at the sides and apex of the elytra in most of the species of this genus does not seem to have been noted heretofore; this feature is similar to that observed in the genus *Selenophorus*, indicating another bond of affinity. It will also be observed that the head is distinctly larger in the female than in the male in many species, as in *Stenomorphus*. The descriptions of *crassicollis* and *tenebrosus* are taken from the originals, as I do not have these species at hand.

The genus *Trichopselaphus* Chd., has some peculiar male sexual characters, the arcuation of the hind tibiæ in that sex being analogous to the similar arcuation of the intermediate tibiæ in *Discoderus*,

but here, in addition, the hind femora are inflated and strongly dentate beneath and the anterior tarsi are rather broadly dilated and clothed beneath with conspicuous squamules. The type species is *Trichopselaphus subiridescens* Chd., of southern Brazil. Its relationship with *Gynandropus* and *Stenomorphus* is distinctly indicated by the form of the female anterior tarsus, where the basal joint is conspicuously larger than any of the following joints. Lacordaire does not say whether the elytra are triseriately punctate as in *Discoderus*, but in the single Mexican species described by Bates, *T. minor* Bates, the second, fifth and seventh striæ are said to be inconspicuously punctured in series. Mr. Bates states (Biol. Cent.-Amer., I, i, p. 62) that the Venezuelan genus *Anisocnemus* Chd., belongs in this vicinity, being especially allied to *Discoderus*, but, according to the description of Lacordaire, this affinity could only be surmised from the dilatation of the hind femora; in the very acute basal angles of the prothorax it departs widely from *Discoderus;* there may however be a closer affinity with *Trichopselaphus*, though this seems to be unsuspected by the author of the "Genera," who places the genus just before *Harpalus*.

Hartonymus n. gen.

That so conspicuous and aberrant a generic type should, in the thickly settled state of Illinois, so long have remained undiscovered, is merely a reminder that our Coleoptera are still only known in comparatively small part; the peculiar pallid coloration of the body gives an appearance of immaturity, which may however possibly have led many a collector to reject it as undesirable material—always an unsafe procedure. The body is oblong, subparallel and strongly convex, with broadly rounded basal angles of the prothorax, so that in every way except color it closely resembles a very large *Discoderus*, but the middle tibiæ of the male are straight and unmodified and the anterior and middle tarsi of that sex broadly dilated and strongly biseriately squamose beneath, exactly as in the genus *Harpalus*, from which it differs in having three series of substrial elytral punctures as in *Discoderus* and *Selenophorus*. The ligula is broadest and rectilinearly truncate at apex and equal in length to the moderate, apically obtuse paraglossæ, and the mentum has a broad and sharply triangular tooth, all of which features are

again exactly as in *Harpalus;* it also resembles that genus, and departs from the Selenophorini, in the short basal joint of the hind tarsi. The labial palpi are as in *Harpalus*. In fact the only strong evidences of affinity in the direction of *Selenophorus* are the triple series of elytral punctures, uniformly punctate abdomen, and the *Discoderus*-like facies of the body; as however the triple series are unknown in *Harpalus* and allied genera, it would seem most fitting to place the genus here and not in the Harpalini. This genus is the best example known to me of the almost interminable cross affinities, which render a satisfactory subdivision into tribes and genera so difficult and uncertain throughout the Harpalinæ. The type species may be described as follows:

Body oblong-elongate, strongly convex, shining, the elytra (♀) slightly alutaceous; color pale and uniform testaceous throughout; head nearly two-thirds as wide as the prothorax, only feebly constricted at base, the eyes moderate, the foveæ minute and perforato-punctiform; mandibles short, largely hidden when closed, the antennæ moderately stout, as long as the thoracic width, or shorter (♀); prothorax one-half wider than long, slightly widest before the middle, the sides almost evenly and broadly arcuate; apex feebly and sinuously, the base rectilinearly, truncate, equal in width; basal angles broadly rounded; surface impunctate, steeply sloping at the sides to the rather wide subdeplanate reflexed margin throughout the length, the flattened margin curving inward at base, smooth but having four long erect setæ arising from coarse punctures; stria extremely fine, the foveæ small, sublinear and deeply impressed, wholly impunctate; elytra oblong, parallel, with feebly arcuate sides and obtuse apex, equal in width to the prothorax and fully one-half longer than wide, the humeri minutely denticulate, the sinus broad and extremely feeble, the apices (♂) rounded, or (♀) with acutely spiniform sutural angles, the denticles bordered externally by a short deep sinus, this structure being somewhat as in *Harpalus lewisi;* striæ rather strong, the scutellar very moderate, the intervals nearly flat, slightly convex suturally, nowhere punctulate, the marginal line of foveæ not medially interrupted; punctures of the three lines coarse, widely spaced and somewhat erratic, not always closely connected with the striæ, this being especially the case with the middle series; abdomen uniformly, finely and sparsely punctulate, the punctures bearing erect and rather stiff short hairs, the apex with four setæ in both sexes; legs rather stout, the hind tarsi filiform, moderately stout, the three basal joints decreasing uniformly and slowly in length, the first two-thirds as long as the fifth, the claws rather long, slender and not very arcuate; bristling hairs of the middle and hind tibiæ very numerous; tibial spurs short and stout, the single spur of the anterior with a distinct angulation at one side near the base.

Length (♂ ♀) 10.5–13.0 mm.; width 3.8–5.0 mm. Illinois (Topeka), —Hart and Hood. Rather abundant. . . . . **hoodi** n. sp.

Aside from the plurality of marginal thoracic setæ, in which it resembles *Nothopus*, *Piosoma* and the Acupalpid *Glycerius nitidus*, the triple elytral series of punctures and uniformly punctulate abdomen, in which it resembles *Selenophorus* and allied genera and the peculiar pallid coloration of the dense integuments, in which it perfectly recalls *Geopinus* and *Pharalus*—all constituting further examples of the confusing structural parallels previously alluded to,—the characters of this genus are so purely Harpalid that it forms a very strong argument in favor of those who contend against the propriety of separating *Selenophorus* from *Harpalus*. In such cases there are only two courses available to the systematist: either to regard all as forming a single genus, with numerous subgeneric groups, which must be named in order to facilitate reference, or to consider these groups as genera. For nomenclatorial reasons I believe the latter course to be by far the more rational, if warranted in any way by structural divergencies. There are numerous instances of polymorphous genera of this kind in the Mollusca, such as *Pleurotoma* and *Pyramidella*.

Tribe STENOMORPHINI.

There is but a single genus assignable to this tribe, one of the most isolated types of the subfamily as follows:

Stenomorphus Dej.

While the radical departure in habitus of this genus from the others warrants a rather wide separation from more normal forms of the subfamily, it is none the less truly a member of the Harpalinæ in all structural features, and its assignment to the Pogoninæ by Lacordaire was a decided error; but, in the early days, before the discovery of criteria afforded by the supra-orbital setæ, failure to observe true relationships was quite excusable. The under surface of the male tarsus was however erroneously figured on Plate XII of the "Genera" by that author, joints 2–4 being depicted as uniformly clothed throughout their under surface. In this genus the tarsi are of a peculiar form, though recalling in their most salient features those of *Gynandropus*. In the male, the first joint

of the anterior tarsi is not much dilated but long, not quite equaling the next three combined and evidently wider than the second, perfectly nude beneath; joints 2–4 feebly diminish in size and have beneath two series of large and upwardly inclined squamæ, the texture of which is longitudinal and quite unlike the transversely strigose squamæ of *Gynandropus* and the series are furthermore evidently separated and not contiguous as they are in that genus; the middle tarsi differ scarcely at all from the posterior, but seem to have a few feeble and scarcely discernible squamæ beneath joints 2–4, amid the spiniform hairs. In the female, the first joint of the anterior and, to a less degree, that of the intermediate tarsi, is much more strongly dilated than in the male, oval, narrowed basally and truncate at apex, as long as the next three combined and even somewhat more than twice as wide as the second on the anterior pair, 1–4 nude beneath but with short sparse spines, 2–4 spinulo-setose laterally beneath and relatively much smaller than in the male. The palpi are unusually inflated, the last joint of the labial oval, truncate at tip and bristling with setæ in a way not so noticeable in most of the normal genera. The mental sinus is edentate. The elytra have two series of setigerous punctures, at the second and fifth striæ, which do not seem to have been observed hitherto.

The species are rather numerous, those known to me, either in nature or by description, being as follows:

Posterior tibiæ with series of spinules, the anterior with a fringe of coarse hairs internally. [*Stenomorphus* in sp.]..... 2

Posterior tibiæ with rows of stout hairs replacing the spinules, the anterior fringed internally with long dense white hair. [*Agaosoma* Ménét.].. 4

2—Prothorax of the male more than three-fourths as long as the elytra; body pale castaneo-rufous in color, the legs still paler; prothorax parallel in anterior two-thirds, thence gently narrowed to the base, the basal foveæ feeble; legs rather long. Length (♂) 14.0 mm. Mexico. (Guanajuato—Dujes). [*S. rufipes* Bates nec Lec., the description drawn from the figure published on Pl. 3, Biol. Cent. Amer. I, Part 1]..... **batesi** n. sp.

Prothorax of the male never more than two-thirds as long as the elytra, that of the female much shorter, three-fifths as long as the latter.. 3

3—Body very slender as usual, black, shining; prothorax one-half longer than wide, gradually narrowed posteriorly, the hind angles rounded, briefly and deeply impressed at each side at base; elytra deeply striate; antennæ, palpi and legs obscure ferruginous. Length (♂) 10.5 mm. Dr. Berlandière's collection. [Description drawn from the original (Proc. Acad. Nat. Sci., Phila., 1858, p. 59)].. **rufipes** Lec.

Body much larger, very elongate, feebly convex, smooth and shining, dark castaneous in color, the legs but little though sensibly paler. Male with the head small, less than two-thirds as wide as the prothorax; antennæ slender, long, extending rather beyond the base of the prothorax, obscure ferruginous, the basal joint barely as long as the third though thicker; frontal impressions small, deep, sublinear, isolated and at some distance from the apex of the epistoma, the suture fine and rectilinear; eyes moderate, prominent; prothorax fully one-half longer than wide, four-fifths as wide as the elytra, the sides parallel, feebly and evenly arcuate, becoming moderately convergent and sublinear or very feebly sinuate in basal two-fifths to the broadly rounded angles; base sinuato-truncate, the marginal groove interrupted medially; apex feebly sinuate, the angles broadly rounded; surface even, with a very fine but entire median stria, the basal impressions long, fine and linear, outwardly curved basally, rather deep and more than a fourth the total length, punctured throughout their length, the remainder of the surface impunctate; elytra nearly four-fifths longer than wide, subparallel and very feebly arcuate at the sides, gradually rounding behind in about apical third, oblique but barely at all sinuate at apex; base broadly sinuate, the humeri somewhat prominent basally but rounded; striæ very deep, sulciform, impunctate, the scutellar long and deep, parallel, the series of marginal foveæ broadly interrupted; legs remarkably short, the tarsi rather thick, filiform, somewhat hairy above, the basal joint of the posterior fully as long as the next two. Female like the male but smaller and more abbreviated, differing in the tarsi, as described above, the basal joint of the posterior also differing, being notably longer than the next two; prothorax barely a fourth longer than wide and relatively broader, being almost as wide as the elytra though otherwise similar; head relatively much larger, fully three-fourths as wide as the prothorax; antennæ with the basal joint longer, distinctly longer than the third. Length (♂) 14.0, (♀) 11.7 mm.; width (♂) 3.7, (♀) 3.2 mm. Texas (Fort Worth). Four examples..... **scolopax** n. sp.

4—Body very elongate, black, shining; front deeply bifoveate, sparsely punctured laterally; prothorax more than twice as long as wide [probably overstated], the sides broadly rounded, narrowed posteriorly, at base at each side and before the base at the middle, vaguely foveate; elytra slightly wider than the prothorax, truncate at base, deeply striate, the intervals slightly convex. Length 17.2 mm. California (Sacramento?). [Description drawn from that of LeConte (Rept. on Surveys, 1860, p. 28)]..... **californicus** Mén.

The interesting reversal of the usual sexual characters of the Coleoptera in having the head larger, the prothorax broader and the special sexual characters of the tarsi more developed, in the female than in the male, as shown in *scolopax*, reveals itself repeatedly in this subfamily. In many species of true *Harpalus* I

have observed that the head is relatively somewhat larger in the female than in the male, sometimes, as in the case of *Harpalus viduus*, notably larger.

Tribe ANISODACTYLINI.

This is a large tribe and one of the most clearly circumscribed of the subfamily. The body is oblong and more or less stout and convex, the anterior and middle tarsi of the male having dense homogeneous pads of erect squamiform pubescence beneath. Otherwise there is considerable variety of structure, sculpture and coloration. The terminal spur of the anterior tibiæ is remarkably diversified in form, in some groups being slender and simple, in others subbasally swollen or angulate on one or both sides to strongly trifid, but the form of this spur is somewhat misleading from a taxonomic viewpoint and does not necessarily indicate the degree of generic relationship. I have however found some other structural features, such as the mentum, ligula and paraglossæ, to be of very decided value, the division of those generic groups having a distinct mentum tooth into two sections according to the form of the paraglossæ, for example, being very sharply drawn and devoid of ambiguity. The genera are numerous, those represented before me being as follows:

Mentum not toothed.....2
Mentum with a clearly defined angulate tooth.....11
2—Basal joint of the hind tarsi more elongate, fully as long as the next two combined and often longer.....3
Basal joint shorter, as a rule not as long as the next two combined; ligula and paraglossæ somewhat as in *Anisodactylus*.....8
3—Abdomen impunctate, excepting the usual basal punctulation.....4
Abdomen punctured over the entire surface, the elytra also closely and uniformly punctate throughout; terminal spur of the anterior tibiæ slender and simple or nearly so.....7
4—Ligula increasing moderately in width apically, the tip more or less evidently expanded, the paraglossæ obtusely prolonged to a moderate degree externally at apex; elytra and abdomen not punctulate or pubescent; hind angles of the prothorax sharply defined to rather broadly rounded; hind tarsi long, glabrous above.....5
Ligula narrow, not expanded at apex; hind tarsi long and glabrous above.6
5—Terminal spur of the anterior tibiæ strongly and acutely trifid. Nearctic regions. [*Gynandrotarsus* Laf.].....**Triplectrus**
Terminal spur simple or nearly so, acute, sometimes subangularly swollen near the base. Nearctic and palæarctic regions. [*Aplocentrus* Lec.].
Anisodactylus

6—Anterior tibial spur slender and simple; thoracic angles broadly rounded. Atlantic regions. **Xestonotus**

7—Ligula narrow, not at all expanded at tip; lateral line of elytral foveæ not interrupted; alternate elytral intervals not more coarsely punctate. Atlantic regions. **Amphasia**

Ligula broader and very broadly, angularly expanded at apex; lateral line of foveæ uninterrupted; intervals 3–5–7 of the elytra with coarser confused punctures. Atlantic regions. **Pseudamphasia**

8—Terminal spur of the anterior tibiæ strongly trifid; body not daptiform. 9

Terminal spur gradually dilated basally and tumid or broadly angulate at each side near the base. 10

9—Abdomen punctate throughout, elytral intervals all seriately punctate; body hairy. Pacific coast fauna. **Dicheirus**

Abdomen impunctate, excepting the usual fine post-coxal punctulation; integuments glabrous, the elytral intervals not punctate; body nearly as in *Anisodactylus*, dark in color with brilliant metallic lustre above. Palæarctic region. ***Hexatrichus**

10—Body nearly as in *Daptus* in habitus, the prothorax more or less cardiform; coloration in part pale but always with dense integument; elytra generally impunctate but sometimes with the alternate intervals confusedly punctate. Atlantic to Pacific. **Anadaptus**

11—Paraglossæ broadly obtuse at apex, the ligula generally slender and not or barely at all expanded at apex. 12

Paraglossæ externally prolonged and slender at tip. 15

12—Abdomen glabrous and impunctate behind the basal region; anterior tibiæ spur simple and slender. 13

Abdomen and entire elytra densely and uniformly punctured and pubescent; anterior tibial spur simple and slender. 14

13—Body daptiform, compact, with thick and shining integument, the hind angles of the prothorax sharply defined; basal joint of the hind tarsi short, not as long as the next two combined; ligula very slender when compared with the paraglossæ. Sonoran regions. **Stilbolidus**

Body not daptiform, with thin integument as a rule, the hind thoracic angles always blunt, at least at their tips; basal joint of the hind tarsi long, equal to or exceeding the next two combined; ligula less slender. Atlantic to Sonoran regions; apparently not entering the true Pacific coast faunal limits. **Anisotarsus**

14—Basal joint of the hind tarsi long, the tarsi very densely hairy above; ligula very slender; prothorax not daptiform, the hind angles rounded. Palæarctic regions. ***Scybalicus**

15—Prothorax with rounded hind angles; tarsi very hairy above; anterior tibial spur extremely stout, truncate, strongly trifid; elytra and abdomen densely punctate throughout as in *Scybalicus;* ligula very broad, extremely expanded and laterally acute at tip. Palæarctic regions. ***Gynandromorphus**

Prothorax with sharply marked and generally right basal angles, the ligula not so broadly expanded. 16

16—Paraglossæ with the externally prolonged apices very slender and

widely diverging; body large, broad and subglabrous, sombre in coloration. Atlantic and Gulf regions. . . . . **Spongopus**

Paraglossæ with the slender apices not widely diverging; body small in size, densely punctate above and beneath, pale, with large obscure elytral macula, nearly as in *Gynandromorphus*; hind angles of the prothorax sharply right, with an erect seta as in *Dicheirotrichus* and *Trichocellus*, the second labio-palpal joint long and with very numerous bristling setæ as in typical *Anisodactylus*. Palæarctic regions. . . . . ***Diachromus**

The genus *Dicheirotrichus*, which was placed in this tribe by Duval, is a singularly annectant form. The tarsal pads of the male are loose and rather confused, but the general facies of the body is somewhat as in the Acupalpid genus *Trichocellus*. The second joint of the labial palpi has three long setæ. I have placed it among the Acupalpids rather than here. The European genera introduced for comparative purposes in the above table are all so well known that it seems unnecessary to dwell more upon them, further than to say that *Hexatrichus* Tsch., seems to be valid as a genus rather than as a subgenus of *Anisodactylus*, which is its present position in the recently published catalogue of Heyden, Reitter and Weise.

Triplectrus Lec.

Gynandrotarsus Laf.

This genus has been united with *Anisodactylus* in modern works, but there are some peculiarities which seem to show that it can be regarded as a genus with a good deal of propriety. Its species can always be recognized at once by the strongly trifid anterior tibial spur, which is always a non-sexual feature, but aside from this there is a modification of the anterior female tarsi occurring here and nowhere else in the tribe—not developed in all the species it is true, but clearly defined in several, such as *harpaloides*, *opaculus* and *texanus;*—this is the lateral dilatation of the basal joint, a very significant character, recalling a nearly similar modification in *Stenomorphus* and *Gynandropus*. Intervals 3–5–7 of the elytra have in all the species a few serial punctures along the median line of the interstice at apex, exactly as in *Glanodes*, and especially in *Piosoma alternata;* this is another puzzling parallelism and a character which is not observable in *Anisodactylus*. The basal joint of the hind tarsi is very long, often scarcely shorter than the next

three. The species, which appear to be purely nearctic, are moderately numerous and recognizable as follows:

Basal joint of the anterior tarsi (♀) not evidently broader than the second. 2

Basal joint (♀) dilated, much wider than the second. (*Gynandrotarsus* Laf.) 13

2—Pronotum broadly flattened, rugulose and strongly though not very densely punctured latero-basally. Body subparallel, rather convex, deep black when mature, shining, the elytra alutaceous (♂) or densely opaque (♀); under surface and legs black; antennæ rather stout, scarcely extending to the thoracic base, black, the first two joints rufescent; palpi piceous, paler apically; head barely half as wide as the prothorax, the eyes very moderate, the foveæ small, elongate-perforate, with attendant feeble impression of the surface; prothorax two-fifths wider than long, the sides broadly rounded, gradually more converging anteriorly, the apex deeply sinuate and much narrower than the rectilinear base, the basal angles obtuse and evidently rounded; surface smooth, rapidly declivous to the broad concave horizontal and opaculate margins, which expand basally into a perfectly flat surface; foveæ large but extremely feeble, separated from the flat sides by a feeble convexity, all closely punctate; stria subentire, fine anteriorly, stronger basally as a rule; elytra very slightly wider than the prothorax, one-half longer than wide, broadly ogival at apex, the sinus broad and extremely feeble, almost vestigial; striæ fine, the scutellar long, the intervals feebly convex or barely at all so (♀), the side margins and apex with excessively minute punctulation bearing small hairs; third interval behind the middle with two punctures on each elytron near the second stria; abdomen with rather close punctulation bearing somewhat long hairs medially at base; anterior tarsi (♂) very broadly dilated, the second joint almost twice as wide as the first. Length (♂ ♀) 11.4–13.0 mm.; width 4.4–5.2 mm. Long Island to Missouri. [*Anisodactylus luctuosus* Dej. and *rufipennis* Lec.]. . . . . **carbonarius** Say

Pronotum smooth and not strongly or abruptly deplanate latero-basally . 3

3—Upper surface opaculate in both sexes. 4

Upper surface very strongly shining throughout, at least in the male . . 11

4—Third interstrial interval as a rule with two or more substrial punctures behind the middle. 5

Third interval with a single substrial puncture, excepting a few very near the apex. 10

5—Upper surface moderately convex, the prothorax evenly and usually rather strongly narrowed from base to apex. 6

Upper surface strongly convex, the prothorax subparallel basally, arcuately narrowing apically. 9

6—Prothorax shorter, the sides arcuato-convergent from base to apex . . 7

Prothorax much less transverse, the sides at first feebly, then more strongly, converging anteriorly, head much larger. 8

7—Form oblong-oval, rather brownish-black, the latero-basal parts of the prothorax somewhat pallescent from diaphaneity; under surface

and legs black; antennæ slender, blackish, the two basal joints testaceous; lustre rather dull, the elytra opaculate in both sexes; head moderate, not over half as wide as the prothorax, the eyes moderate but prominent; prothorax fully one-half wider than long, the apex deeply sinuate and barely two-thirds as wide as the base, the sides very evenly and moderately arcuate and converging throughout, the edges rather finely and abruptly reflexed; base transverse medially, very feebly posteriorly oblique laterally, the angles right, narrowly rounded; surface impunctate, moderately declivous at the sides throughout, the foveæ sublinear but very broadly, feebly impressed and vague; elytra subequal in width to the prothorax, not quite one-half longer than wide, gradually rounding at the sides and ogival posteriorly, the sinus feeble but evident; surface not evidently punctulate at the sides and tip, the striæ rather fine, abrupt, the scutellar long, the intervals nearly flat; hind tarsi very slender, the basal joint as long as the next three combined. Length (♂ ♀) 9.0–10.5 mm.; width 3.8–4.5 mm. Rhode Island to Arizona. Very abundant. [*Anisodactylus tristis* Dej.].

rusticus Say

A—Similar to *rusticus* in general form but larger, the humeri similarly without denticulation at base; head slightly larger; prothorax not quite so transverse, otherwise similar, but with the anterior angles rather more advanced and a little more acute and the punctiform impression at the anterior end of the basal foveæ is more pronounced; elytra rather more dilated toward base, more deeply striate and with more convex intervals, the posterior seriate punctures distinct. Length (♀) 12.5 mm. Locality uncertain, probably either from Carolina or Missouri.

haplomus Chd.

Form somewhat similar but larger and very much broader, still more opaque throughout above; antennæ (♀) still more slender and evidently longer; prothorax broader, nearly twice as wide as long, the apex still narrower and more deeply sinuate, about three-fifths as wide as the base, otherwise very nearly as in *rusticus* throughout; elytra similar but broader, only about two-fifths longer than wide, the humeri minutely but acutely denticulate laterally at base; legs a little longer but otherwise similar. Length (♂) 13.5–13.8 mm.; width 5.4–5.6 mm. North Carolina (Southern Pines),—Manee; NewYork—LeConte. [*A.* (*Triplectrus*) *gravidus* Lec.]. . **crassus** Lec.

Form stout, nearly as in *crassus* but with the pronotum transversely and feebly rugose and the subdepressed margins—posteriorly increasing in width—obsoletely but rugosely punctate, not perfectly smooth and densely opaque as in the three preceding forms, the basal foveæ feeble but with a few sparse punctures, which are never distinct in those species. Length 13.7 mm.; width 5.5 mm. Rocky Mountains.

pinguis Lec.

Form less stout, nearly as in *rusticus* but more convex, black or blackish throughout, the two basal joints of the antennæ rufous; lustre moderately opaque throughout as in *rusticus;* head distinctly larger and with larger and more conspicuous eyes, fully three-fifths as

wide as the prothorax, the latter slightly longer, two-fifths wider than long, the sides moderately and evenly converging and very evenly and feebly arcuate from base to apex, the latter deeply sinuate, two-thirds as wide as the base, which is subrectilinearly transverse throughout; anterior angles produced but broadly rounded at their apices, the basal angles somewhat less than right and simply blunt; basal bead entire, nearly flat and shining; surface evenly declivous to the reflexed margin throughout the length as in *merula*, the transverse impressions feeble though obtusely evident medially, the stria very fine, not quite entire and the foveæ long, linear, feeble, impunctate and not punctiform anteriorly; elytra not quite one-half longer than wide, very little wider than the prothorax, evenly arcuately ogival behind the middle, the sinus very feeble; humeri minutely denticulate at base; striæ fine, the scutellar long, the intervals almost flat, 3–5–7 with even series of small, distinct and widely spaced punctures, much more extended than usual and almost attaining the middle of the length on all three; hind tarsi with the basal joint as long as the next three. Length (♀) 11.5–12.5 mm.; width 4.8–5.2 mm. Texas (Austin and Waco).....**æthiops** n. sp.

8—Body oblong-oval, rather stout, deep black, the pronotum feebly diaphanously pallescent laterally, the under surface and legs black; antennæ as in *crassus;* palpi black, pale at tip; head more developed than in *rusticus* or *crassus*, distinctly more than half as wide as the prothorax, the eyes moderately prominent, the foveæ small, irregularly perforato-punctiform; prothorax not quite one-half wider than the median length, the sides broadly arcuate and converging apically, much less arcuate posteriorly; apex deeply sinuate, not quite three-fourths as wide as the base, which is nearly as in *rusticus*, the angles right, with their tips blunt; surface nearly as in *rusticus*, except that the impunctate foveæ are rather more impressed; elytra nearly as in *rusticus;* hind tarsi (♀) similarly very slender but with joints 2–4 notably less elongate. Length (♂♀) 10.2–11.5 mm.; width 4.0–4.8 mm. Virginia to Florida and Texas (Austin). Nine examples.....**merula** Germ.

Body oblong-oval, still stouter than in *merula* and more densely opaque than any other species, deep black, even the sides of the prothorax not diaphanously paler, the legs and under surface as in the preceding; antennæ rather long and very slender, black, the two basal joints abruptly pale testaceous; head well developed as in *merula* but with much less convex eyes, the foveæ very small, abruptly perforato-punctiform but at the anterior end of distinct impressions; prothorax much more elongate, only about a third wider than long, rather densely opaque and wholly punctureless, the sides, apex and surface nearly as in *merula* but with the foveæ rather sharply defined, long, slender, linear and distinct; elytra relatively not quite so broad, subequal in width to the prothorax and only twice as long, the sides gradually rounding behind, the apex still more acutely ogival, the sinus broad and deeper than in any of the preceding; margins with a very few small punctures besides the foveæ, which as usual are not interrupted medially; striæ strong and rather deep, the scutellar

long, the intervals slightly convex and extremely opaque; humeri not denticulate; hind tarsi nearly as in the preceding species. Length (♂♀) 10.5–12.3 mm.; width 4.3–5.2 mm. Texas (Galveston) to District of Columbia..... **peropacus** n. sp.

9—Form oblong-oval, moderately stout, very convex, deep black, somewhat piceous beneath, the legs black; antennæ slender, nearly black, the first joint pale, the second dusky, testaceous; upper surface (♂) feebly shining, or (♀) with the elytra densely sericeo-opaque; head slightly more than half as wide as the prothorax, the eyes well developed and prominent, the foveæ moderately small, deep, somewhat irregular; prothorax one-half wider than long, subparallel, the feebly arcuate sides more rounded and converging at apex, which is deeply sinuate and three-fourths as wide as the base, the latter very faintly sinuate from side to side, the angles right and evidently though not broadly rounded; surface wholly impunctate, rather convex, shining, opaculate at the sides and latero-basally, rather strongly but not abruptly declivous laterally, gradually feebly and more broadly so basally, the marginal bead moderately and abruptly elevated; stria very fine, the foveæ rather long and narrow but very feeble, impunctate; elytra oblong-oval, with evidently rounded sides, one-half longer than wide, barely perceptibly wider than the prothorax, the sides rather rapidly rounding and ogival behind, the oblique sinus long and very feeble; striæ fine, the scutellar long and deep, the intervals flat or nearly so, the third with three or four punctures behind the middle, the fifth and seventh with the usual apical series; abdomen very shining, with a small patch of very fine punctures behind the inner part of each coxa; basal joint of the hind tarsi almost as long as the next three combined. Length (♂♀) 12.0–12.5 mm.; width 5.0–5.4 mm. Arizona (probably southern). Six examples..... **convexus** n. sp.

10—Form oblong-oval, not very convex and moderately shining throughout, deep black; legs black, the tarsi slightly piceous; antennæ slender, dark brown, the two basal joints and the palpi testaceous; head slightly more than half as wide as the prothorax, with rather small, moderately convex eyes and minute rounded perforato-punctiform foveæ; prothorax with very evenly and distinctly arcuate sides from base to apex, with abruptly elevated bead, the apex deeply sinuate and barely more than two-thirds as wide as the base, which is broadly and feebly sinuate medially, feebly posteriorly oblique laterally, the angles right and broadly rounded; surface not much duller laterally or basally, steeply declivous anteriorly to the fine reflexed edge, the latter rapidly broader, abruptly flat and with a few feeble punctules posteriorly, not abruptly but gradually flattened basally, the foveæ broad and feeble but distinct, impunctate though slightly rugulose and separated from the lateral flattening by the prolonged convexity of the general surface, the stria very fine; elytra equal in width to the prothorax, almost one-half longer than wide, the sides gradually rounding and converging behind the middle to the acutely ogival apex, the sinus very feeble; striæ fine but deep, the scutellar long, the intervals feebly

convex, the third with a distinct puncture at three-fifths on the second stria, no others visible in the type, except the very short medial series on 3–5–7 at apex; basal joint of the hind tarsi as long as the next three. Length (♂ ♀) 12.0–13.0 mm.; width 4.9–5.6 mm. Missouri (St. Louis) and Kansas (Salina). . . . . **ovularis** n. sp.

11—Basal foveæ of the pronotum short, oblong, rather shallow but distinct, wholly impunctate, the sides rather abruptly deplanate, gradually so in basal third or fourth and not punctate. Body rather narrowly oblong, moderately convex, very shining throughout (♂), or with the elytra slightly alutaceous (♀), deep black throughout, the male tarsi not paler; antennæ slender, black, with the basal joint alone testaceous; palpi black, the apex pale; head but little more than half as wide as the prothorax, with the eyes very moderate in size and prominence, the foveæ not very small, deep; prothorax transverse, one-half (♂) to three-fifths (♀) wider than long, the sides rounded and converging apically, straighter and more parallel basally, the apex moderately sinuate and much narrower than the base, which is very feebly sinuate from side to side, the angles right and rather narrowly rounded, the stria very fine; elytra not quite one-half longer than wide, not distinctly wider than the prothorax, the sides rounding and converging posteriorly from behind the middle; not very acutely ogival at apex, the sinus extremely feeble; striæ fine, the scutellar long, the intervals flat, the third with a substrial puncture just behind the middle and behind this about two others, very erratically situated on the interval, at apex with the usual short medial series on intervals 3–5–7; lateral foveæ very coarse basally and apically but fine medially; abdomen shining; hind tarsi not so slender as in *dulcicollis* but otherwise similar and with the basal joint subequal to the next three. Length (♂ ♀) 10.3–11.0 mm.; width 4.3 mm. Mexico (near the city). [*Harpalus anthracinus* Dej.]. . . . . *anthracinus Dej.

Basal foveæ long, narrow, linear, very feeble but finely punctate; sides of the pronotum declivous but rather gradually, not abruptly deplanate at any point. 12

12—Body oblong-oval, rather convex, black and strongly shining, the pronotum laterally and the elytral suture sometimes feebly rufopicescent, the elytra not evidently (♂) or rather distinctly (♀) alutaceous; under surface and legs blackish-piceous; antennæ slender, piceous, with the two basal joints pale; palpi pale throughout; head half as wide as the prothorax, the eyes moderate but prominent, the foveæ obliquely sublineiform, small and deep; prothorax one-half wider than long or very nearly, the sides evenly and rather strongly arcuate from base to apex, the latter moderately sinuate, with broadly rounded angles and scarcely three-fourths as wide as the base, which is feebly sinuate throughout, with the angles very broadly rounded; surface slightly alutaceous on the sloping sides, though not distinctly so in the male, impunctate, excepting in the narrow linear foveæ, the stria very fine, impinged upon by numerous fine wavy transverse lines; basal bead strong laterally, around the

angle and thence along the sides; elytra subequal in width to the prothorax, in outline and in the sinus as in the preceding, the striæ unusually coarse, deep and abrupt, the scutellar only moderately long, very deep, the intervals flat or very feebly convex, the third with a puncture at three-fifths, generally not exactly on the stria, and no other except the short apical series on intervals 3–5–7, which are very distinct; hind tarsi slender, the basal point very nearly as long as the next three. Length (♂ ♀) 9.0–10.7 mm.; width 3.7–4.2 mm. Mississippi (Vicksburg), Louisiana and Texas. Twelve examples. [*A.* (*Triplectrus*) *ellipticus* Lec.]..... **dulcicollis** Laf.

Body nearly similar but rather more oval, more convex and more shining, even the female elytra being very shining and barely perceptibly alutaceous, except feebly so laterally and also at the sides of the pronotum; coloration similar; head nearly as in *dulcicollis*, the prothorax nearly similar, but less transverse, being distinctly less than one-half wider than long, the sides evenly though much less strongly arcuate, the apex more deeply sinuate, with less broadly rounded angles, the punctured linear basal foveæ larger and more broadly impressed and the basal angles not quite so broadly rounded; elytra nearly similar but with much more convex strial intervals in both sexes; tarsi nearly similar and having the basal joint of the posterior about as long as the next three in the female, though distinctly shorter in the male. Length (♂ ♀) 10.5–11.0 mm.; width 4.1–4.5 mm. Texas (Houston). Three examples... **modicus** n. sp.

13—Hind tarsi as in all the preceding species, the basal joint very much longer than the fifth; upper surface similarly without metallic lustre..... 14

Hind tarsi much shorter, the first joint subequal in length to the fifth; upper surface with evident metallic lustre..... 15

14—Body rather stout, strongly convex, somewhat as in the two preceding, very shining in both sexes, the elytra polished even in the female, deep black throughout; antennæ slender, blackish, the first joint much, the second slightly, paler; head evidently more than half as wide as the prothorax, the eyes moderate and not very convex, the foveæ subtriangular; prothorax one-half wider than long to somewhat less, the sides evenly and moderately arcuate, narrowed anteriorly, just visibly narrower at base than at the middle, the apex deeply sinuate and much narrower than the base, which is rectilinearly transverse, with the angles slightly obtuse and narrowly rounded; surface very steeply declivous at the sides, the margin finely reflexed, unusually narrowly subdeplanate even posteriorly, though rapidly broader at base, the foveæ sublinear and with a few punctures, though feeble and broadly impressed, the stria very fine; elytra slightly wider than the prothorax and almost one-half longer than wide, the sides arcuately converging and obtusely ogival behind the middle, the sinus very feeble; striæ moderately fine, not so coarse as in *dulcicollis*, deep and abrupt, the scutellar long, the intervals moderately to rather strongly convex, the third with two or three punctures behind the middle besides the short interstitial series at apex on 3–5–7; under surface smooth and shining,

the tarsi black. Length (♀) 11.0–12.0 mm.; width 4.2–4.8 mm. Texas..... **texanus** Schf.

Body more narrowly oblong-oval, less convex and dull in lustre, the elytra very dull (♂) and still more densely opaque and often with a feeble greenish tinge (♀); color deep black, the under surface rather less deep, the antennæ slightly obscure, the palpi clearer testaceous throughout; head nearly three-fifths as wide as the prothorax, with well developed and very prominent eyes, the foveæ sublinear, very deep and distinct; prothorax one-half wider than long, slightly narrower at base than medially, narrowed anteriorly, the sides subevenly and distinctly arcuate and with only moderately coarse elevated beading; apex moderately sinuate, nearly four-fifths as wide as the base, which is transverse, feebly sinuate for a short extent at the middle as a rule, the angles slightly obtuse but scarcely at all rounded, their tips merely very finely blunt; surface impunctate and nearly as in the preceding but dull in lustre, the foveæ linear though rather feebly impressed, generally not at all punctured; elytra rather more than one-half longer than wide, barely visibly wider than the prothorax, sensibly flattened above and unusually rapidly declivous at the sides, parallel, obtusely ogival at apex, the sinus not distinct, vestigial; striæ rather fine but deep and abrupt, the scutellar very long; intervals flat or virtually so, the punctures posteriorly as in *texanus*, except that on the third interval they do not extend anteriorly much beyond apical third; under surface alutaceous, the tarsi as in the preceding species. Length (♂♀) 9.0–11.0 mm.; width 3.4–4.4 mm. Texas (Austin). Thirteen examples. [*Anisodactylus elongatus* Chd.]..... **opaculus** Lec.

15—Form narrower and more *Harpalus*-like than in any of the preceding, highly polished in both sexes, the elytra (♀) not duller, black, the upper surface with feeble though evident greenish-metallic lustre on the elytra and latero-basal parts of the pronotum; under surface black; apical margins of the ventral segments, epipleura and entire legs pale testaceous; antennæ not very slender, fusco-testaceous, the two basal joints paler; head nearly three-fifths as wide as the prothorax, with moderate though very prominent eyes, the foveæ coarse, linear and very deep; prothorax nearly one-half wider than long, subparallel, wider slightly before the middle than at base, the sides rounded anteriorly, straight for a short distance behind the middle, then broadly rounded to the angles, which are right but broadly rounded; apex moderately sinuate, with broadly rounded angles, distinctly narrower than the base, which is broadly and feebly sinuate medially; surface steeply sloping to the unusually fine reflexed edge, which continues fine to behind the middle, where it expands slightly and disappears, the margins with a few punctures posteriorly, the foveæ sublinear but shallow and very broadly impressed, coarsely and conspicuously punctured, the broadly convex area thence to the sides impunctate, the stria fine; elytra not (♂) or evidently (♀) wider than the prothorax, fully one-half longer than wide, obtusely ogival at apex, the sinus very feeble though evident; striæ fine but rather deeply impressed, the scutellar long, coarse and deep; intervals

convex, feebly externally, strongly suturally, the third with a single puncture behind apical third, the apical series on 3–5–7 evident but very short; marginal series interrupted medially; hind tarsi unusually short, the basal joint barely longer than the next two combined. Length (♂♀) 9.0–9.7 mm.; width 3.3–3.8 mm. Missouri (St. Louis). Four examples. [*Gynandrotarsus harpaloides* Laf.].

harpaloides Laf.

The species described by La Ferté as *harpaloides* is singularly aberrant, and were it not for the fact that the swollen basal joint of the anterior female tarsi is exactly reproduced in the more normal *texanus* and *opaculus*, I should be disposed to give *Gynandrotarsus* generic standing. *Carbonarius* is also a remarkably distinct species, for not only are there two distinct and constant post-medial punctures on each elytron—a fact overlooked by Horn, but merely a particular stage of the anterior prolongation of the apical series on the third interval noticeable in all the species of the *rusticus* section,—but the prosternum is punctulate and pubescent medially, as well as the median part of the abdominal base. The epistoma has two punctures at each angle instead of the usual one, but, although perhaps not so inconstant a character as in *Harpalus viridiæneus*, it is at least unreliable here also, for in several cases at hand there are three punctures instead of two. The species of the *rusticus* section, as defined above, which were suppressed by Horn, seem to be sharply limited and amply worthy of adoption.

Anisodactylus Dej.

Aplocentrus Lec.

The first species described under this name by Dejean, *Carabus heros* Fabr., probably differs generically from *binotatus*, which I assume to be the type of the genus. The peculiar coloration of the body and disposition of the discal punctures of the elytra in *heros*, indicate that it should not be associated closely with *binotatus*, the latter being perfectly congeneric in every way with all of our numerous black or feebly metallic species, and *binotatus* Fabr., ought therefore, in view of numerical preponderance, to be considered the generic type; the American species outnumber the palæarctic three or four to one.

The genus *Anisodactylus* is very well defined in habitus and in several structural features. The slender hind tarsi, with elongate

basal joint, are nearly as in *Triplectrus*, except that the upper surface is not completely impunctate and glabrous as in that genus but has more or less evident, sparse and sometimes rather strong punctures bearing erect pale setæ and the basal joint is relatively not quite so long. The terminal spur of the anterior tibiæ is acute and generally swollen slightly or broadly angulate on one side or at least asymmetrically toward base. The elytra also differ greatly from those of *Triplectrus* in never having more than one discal substrial puncture and in having no vestige of the apical series of punctures on intervals 3–5–7; there is, however, sometimes a fine suffused punctulation on the alternate intervals at apex, homologous with that so well developed in *Anadaptus porosus* Mots. and *pitychrous* Lec. The vertex generally has a central rufous spot, not only in this genus but several others of the tribe, which spot I have never observed in *Harpalus*.

The numerous species may be outlined as follows:

Anterior tibial spur swollen and usually obtusely angulate at least on one side near the base.....2

Anterior tibial spur very slender and simple; body small in size, the surface lustre more or less metallic. (*Aplocentrus* Lec.).....22

2—Color deep black throughout the body and legs, the upper surface never having a trace of metallic lustre.....3

Color black, the tibiæ and tarsi piceous, the upper surface with rather strong but varied metallic lustre. Pacific coast.....21

3—Species of the Atlantic regions; body rather stout as a rule and with deeper elytral striæ except in *furvus*, the posterior thoracic angles frequently somewhat rounded; head about half as wide as the prothorax as a rule.....4

Species of the Pacific faunal regions, the body in general more slender in form and always with fine elytral striæ, the posterior thoracic angles always sharply defined; epistomal angles with a single setigerous puncture; head slightly more than half as wide as the prothorax throughout.....10

4—Hind angles of the prothorax slightly obtuse and more or less narrowly but distinctly rounded.....5

Hind angles slightly obtuse but always rather sharply marked, never distinctly rounded.....7

5—Elytra rather densely opaque and lustreless in both sexes. Body oblong-oval, much less convex than in any of the others, the head, prothorax and under surface shining; head with deep and moderately small elongate perforate foveæ, the antennæ rather slender, blackish, the basal joint testaceous; epistoma with a single setigerous puncture at each angle; prothorax one-half wider than long, the sides evenly and rather strongly arcuate, the apex deeply sinuate,

with rather narrowly rounded angles and much narrower than the base; surface deplanate and closely punctured at the sides, finely anteriorly, more broadly basally, the foveæ very large, shallow, rounded and closely punctate, the punctures continuous with those of the sides; stria distinct, attaining base but not the apex; elytra equal in width to the prothorax (♂) or distinctly wider (♀), rather less than one-half longer than wide, gradually obtusely ogival posteriorly, the sinus very feeble but evident; striæ fine and shallow, the scutellar long, the intervals flat or nearly so, without punctulation of any sort, the discal puncture near apical third and frequently widely detached from the stria; hind tarsi with the basal joint distinctly shorter than the next three, extremely finely and sparsely punctulate above. Length (♂♀) 11.0–12.0 mm.; width 4.2–4.9 mm. North Carolina (Asheville) to Missouri (St. Louis). . **furvus** Lec.

Elytra apparently opaque in both sexes; size very much larger than in any other species and also differing from any other in having no substrial elytral puncture. Body black; epistoma with a single puncture at each angle; head larger in the female than in the male; prothorax at base narrower than the elytra; apex and base nearly equal in width, the sides arcuate, the hind angles obtuse and rounded; lateral margin rather widely depressed and densely punctulate; foveæ large; surface almost smooth, finely punctate near the apical margin, more coarsely along the basal; elytra feebly arcuate at the sides, the striæ impressed but not punctate; intervals convex, not punctulate; mentum, ligula, paraglossæ, anterior tibial spur and the male tarsi as in the other true Anisodactyli; hind tarsi slender. Length 18–19.5 mm. Alabama (Mobile). . . . . **lodingi** Schf.

Elytra polished in the male, feebly alutaceous in the female, the surface more convex; epistoma having two setigerous punctures at each angle as a rule. 6

6—Body oblong-oval; head with short narrow and sublinear fôveæ, the eyes somewhat prominent but very moderate in size as usual; antennæ slender, nearly black, the basal joint testaceous but partially clouded with blackish; prothorax one-half wider than long, the sides very evenly and rather strongly arcuate, the apex moderately sinuate, with rather broadly rounded angles and evidently narrower than the base; surface somewhat as in *furvus*, excepting that the sides are more steeply declivous to the explanate margins, which, with the latero-basal surface, is more coarsely and sparsely punctate, much less broadly flattened laterally at base but more broadly so anteriorly, the foveæ less broad though feeble and separated from the depressed sides by a more pronounced convexity; stria fine, almost entire; elytra subequal in width to the prothorax in both sexes, in outline nearly as in *furvus* but much more convex and more abruptly, obtusely ogival at apex, the sinus a little less feeble and very distinct; striæ fine but very deep, the intervals strongly convex, especially toward the suture, the discal puncture strong, near three-fifths; minute, sparse, suffused punctulation barely traceable, obsolete; hind tarsi as in *furvus*. Length (♂♀) 10.2–13.0 mm.; width 4.0–4.8 mm. Rhode Island to Nebraska. . . . . **harrisi** Lec.

Body nearly similar in form but rather less stout and evidently smaller in size; head with slightly elongate perforato-punctiform foveæ, the antennæ nearly as in *harrisi*, the eyes not so convex; prothorax similar, except that the sides are not so widely or so definitely deplanate and with the punctures finer and obsolescent, the foveæ variable, always feebly impressed and moderately punctate but narrow to very broad in form; elytra similar but with the very minute sparse punctulation somewhat less completely obsolete, though barely glimpsible; intervals similarly much more convex as well as more polished in the male than in the female. Length (♂ ♀) 9.4–11.0 mm.; width 3.7–4.3 mm. Long Island to Virginia and westward to Indiana. [*A. laticollis* Kirby, *punctulatus* Kirby and *Harpalus opacus* Csy.] One example has three well developed setigerous foveæ at each side of the epistoma.....**nigerrimus** Dej.

7—Epistoma with two to three setigerous punctures at each angle.....8

Epistoma with a single setigerous puncture at each angle.....9

8—Body larger and much stouter than in either of the preceding, very strongly convex, the elytra polished and with very fine sparse punctules in both sexes; head with prominent eyes, the foveæ small, anteriorly angulate and deeper; antennæ as in the preceding; prothorax fully one-half wider than long, subparallel, the sides rounded anteriorly, straighter basally, the apex rather deeply sinuate and evidently narrower than the base; surface steeply declivous to the very coarse concavo-explanate, closely and strongly punctured reflexed margin, which broadens but little basally, where it is still concave and separated from the large and moderately deep, closely punctured foveæ by a rather strongly convex and similarly punctured area; stria fine but distinct, subentire, stronger basally; elytra perfectly similar in the sexes and slightly wider than the prothorax, though relatively a little broader in the female, nearly one-half longer than wide, broadly, feebly arcuate at the sides and obtuse at apex, the sinus rather deep and distinct, not very long, the striæ moderately fine, very deeply impressed, the scutellar long as usual; all the intervals very conspicuously convex; hind tarsi with the basal joint but little longer than the next two combined, distinctly longer than the fifth as usual, subglabrous above. Length (♂ ♀) 12.0–12.8 mm.; width 4.9–5.35 mm. New York and New Jersey. [*A. agricola* Lec. nec Say].....**melanopus** Hald.

Body much smaller and narrower in form, the eyes relatively larger, prominent, the foveæ somewhat elongate, deep; antennæ as usual, blackish with testaceous and blackish basal joint; prothorax scarcely more than two-fifths wider than long, parallel, with the sides subevenly and very moderately arcuate, the apex rather deeply sinuate and generally but very slightly narrower than the base; surface steeply declivous to the very coarse and concavo-explanate, closely punctate reflexed sides, which are nearly flat and only a little wider basally, the latero-basal parts as in *melanopus*, except that the densely punctate convexity, separating the very large shallow and conspicuously punctured foveæ from the sides, is narrower; stria subentire, unusually deep and broadly impressed throughout;

elytra oblong, rather abruptly obtuse behind, evidently wider than the prothorax, slightly less than one-half longer than wide, the sinus broad and distinct; striæ deeply impressed, the intervals convex, shining (♂), slightly opaculate (♀), covered throughout, except the sutural interval, with small and sparse but distinct punctures; basal joint of the hind tarsi as long as the next two, but little longer than the fifth. Length (♂ ♀) 11.0–11.8 mm.; width 4.2–4.7 mm. Rhode Island to Indiana. [*A. interpunctatus* Lec. nec Kirby].

nigrita Dej.

9—Form and size nearly as in *nigrita* but with relatively narrower head and prothorax, the head relatively slightly larger and with more convex eyes, nearly three-fifths as wide as the prothorax, the foveæ more minute and punctiform but lying in feeble impressions, the antennæ nearly similar but sensibly more elongate; prothorax differing in outline, having more arcuate sides, straighter basally and widest slightly before the middle, the basal angles with their tips more acute and slightly prominent; surface similar throughout, except that the foveæ are a little deeper and not so diffuse and the stria not so deeply impressed; elytra almost exactly as in *nigrita* but relatively broader, being fully a fourth wider than the prothorax, the intervals not so evenly convex, being flatter externally and more convex suturally, the fine punctures similar but not quite so close-set as in *nigrita*, the tarsi similar. Length (♀) 11.5 mm.; width 4.4 mm. New York. [*A. lecontei* ‖ Chd., and *nigrita* Lec. nec Dej.]. . .**interpunctatus** Kirby

Form and size somewhat as in *melanopus* but still stouter, very strongly convex, the elytra highly polished, with very strongly convex intervals and perfectly similar in the sexes; head nearly as in *melanopus* but larger, more than half as wide as the prothorax, the latter differing very distinctly, being inflated anteriorly, with rather strongly rounded sides, which are straighter basally and widest before the middle as in the preceding, the obtuse basal angles more sharply marked and usually minutely prominent at their tips, less transverse than in *melanopus*, being but little more than two-fifths wider than long, the surface similar, except that the latero-basal punctures are finer, the stria subentire and rather deep though fine; elytra similar but more broadly oval and usually subinflated, being widest a little behind the middle, the sides more strongly arcuate; surface with barely even a trace of fine punctuation at any part, the substrial puncture but little behind the middle; in *melanopus* it is more feeble and more posterior; hind tarsi subglabrous, the basal joint slightly longer than the next two and much longer than the fifth. Length (♂ ♀) 11.5–14.0 mm.; width 4.8–5.5 mm. Indiana, Illinois and Tennessee. [*A. striatus* Lec. and *paradoxus* Hald.].

agricola Say

10—Sides of the prothorax only feebly converging posteriorly and nearly straight; alternate intervals of the elytra apically, and sometimes almost throughout the length, finely and sparsely punctulate; pronotum evidently punctured almost throughout its extent, densely and strongly so basally. 11

Sides of the prothorax rather strongly converging posteriorly and more

or less sinuate, the hind angles more prominent; alternate elytral intervals never with a trace of punctulation even at apex; pronotum less completely punctate, generally in large part smooth.....16

11—Elytra (♂) strongly shining, the micro-reticulation very feeble. Black, shining, the under surface and legs picescent; head feebly rugulose, with prominent moderate eyes and a few scattered punctures about the small deep foveæ and throughout the occiput, the vertex with the usual red spot of the genus; labrum unusually deeply incised; antennæ slender, black, the basal joint testaceous anteriorly, black posteriorly; prothorax scarcely one-half wider than long, widest rather before the middle, the sides broadly rounded, straight posteriorly; apex rather deeply sinuate, with scarcely rounded angles and about three-fourths as wide as the base, which is rectilinearly transverse, with slightly obtuse but sharp, minutely subprominent angles; surface very steeply declivous in anterior two-thirds to the rather coarse reflexed margin, which widens barely at all to that point, where it becomes lost on the flattened though scarcely horizontal, densely punctate latero-basal area, the foveæ large and elongate but extremely feeble, the entire surface punctate and feebly rugulose, the punctures however very fine and becoming coarse and dense only latero-basally; at the sides anteriorly there are some coarser scattered punctures; median stria very fine, biabbreviated; elytra nearly one-half longer than wide, a fifth wider than the prothorax, very obtusely rounded behind, the sinus feeble; striæ fine, coarser apically, the scutellar long; intervals flat, the alternate ones, near base and apically, strongly though confusedly and sparsely punctate; punctures of the two lateral intervals extending to base, these punctures stronger and much coarser than in any other species; discal puncture strong, at three-fifths; hind tarsi sparsely but rather strongly punctured above, the basal joint as long as the next two and barely longer than the fifth. Length (♂) 12.0 mm.; width 4.8 mm. California (Hoopa Valley, Humboldt Co.).....**incisus** n. sp.

Elytra (♂) rather dull sericeo-opaculate, or (♀) very densely dull and sericeo-opaque; elytral punctulation finer and much less distinct, the labrum less deeply incised.....12

12—Alternate intervals of the elytra with fine sparse punctures nearly throughout the length, becoming less sparse in about apical third, these punctures distinct (♂) to very feeble (♀). Head finely, sparsely punctulate basally and laterally, more or less rugose, the rugæ coarse and rather deep near the deep elongate foveæ; antennæ black, with partially pale basal joint, rather slender, shorter in the female; prothorax slightly less than one-half wider than long, the sides broadly arcuate, becoming straight and feebly convergent posteriorly, the apex moderately sinuate, with narrowly rounded angles and somewhat narrower than the base, which is transverse, with the strong bead a little thicker laterally and the angles slightly more than right, with the apices finely acute and subprominent; surface rather strongly but finely and sparsely punctured throughout, more coarsely, very densely and subrugosely latero-basally and with scattered coarse punctures on the lateral slopes, the sides with the

subdeplanate edge turning inward slightly and disappearing near basal third, the foveæ unusually short, very broad and shallow, separated from the sides by a surface which is nearly flat to feebly convex; stria very fine and subentire; elytra one-half longer than wide, slightly wider than the prothorax, parallel, very obtuse at apex and convex, the oblique sinus long, extremely feeble and nearly obsolete, the discal puncture strong, at three-fifths; basal joint of the hind tarsi longer than the next two combined and much longer than the fifth. Length (♂ ♀) 12.0–12.7 mm.; width 4.7–5.0 mm. Oregon (Clackamas Co.) and California (Yreka). . **semipunctatus** Lec.

Alternate intervals only punctulate apically.....13

13—Elytra fully one-half longer than wide.....14

Elytra much shorter, less than one-half longer than wide.....15

14—Body larger and stout, nearly as in *semipunctatus*, strongly convex; elytra (♂) more opaque than in the preceding, very opaque (♀); head nearly similar but rather less rugose, the rugæ distinct, however, near the somewhat smaller foveæ; prothorax nearly similar but relatively not so large, the foveæ similarly very feeble and diffuse but not so short; elytra more elongate, about a fifth wider than the prothorax, parallel, with feebly arcuate sides and rapidly very obtuse apex, the sinus feeble though much more evident than in *semipunctatus*, the striæ still finer, the scutellar similarly long, the intervals more absolutely flat in both sexes; minute and sparse punctulation barely traceable at the sides, the apical punctured parts of the alternate intervals very short, the punctures very fine, almost obsolete in the female; hind tarsi nearly similar. Length (♂ ♀) 11.0–12.8 mm.; width 4.3–5.1 mm. California (Sonoma to Monterey). Rather abundant.....**solidus** n. sp.

Body much narrower and not so convex; head minutely, sparsely punctulate basally and with a few stronger punctures and rugulæ near the small but deep foveæ, the eyes very moderate, the antennæ slender, of the usual coloration, the palpi black, with pale tip; prothorax still more parallel, with more feebly arcuate sides anteriorly, otherwise as in *solidus*, except that the reflexed edge is narrower and more deeply concave, the gutter expanding slightly posteriorly and traceable almost to the base; general punctuation finer, the rugulosity less evident and the surface more shining, the large vague foveæ nearly similar and separated from the sides by a rather narrower and more convex surface; scattered punctures of the lateral slopes not so large, the latero-basal parts densely and subconfluently punctured as in all others of this section; elytra fully a fifth wider than the prothorax, parallel, with feebly arcuate sides and rather abruptly obtuse apex, the sinus long and feeble but evident, the tips near the suture similarly obtuse; striæ, intervals and punctuation as in *solidus*, the lustre (♀) rather less densely opaque; hind tarsi with the first joint much longer than the next two or the fifth. Length (♀) 11.8 mm.; width 4.5 mm. California (Sta. Clara Co.).....**incertus** n. sp.

15—Form more abbreviated than in any of the preceding and much smaller in size, oblong-suboval, only moderately convex; head with

moderate and not very convex eyes, minutely, sparsely punctulate and finely rugulose, the foveæ strong and sublinear, flexed internally; antennæ only moderate in length and rather stout, of the usual color; prothorax shorter than usual, one-half wider than long, the sides more evenly and only moderately rounded, feebly converging and nearly straight basally; surface throughout nearly as in *incertus* and with a similar narrow concave marginal gutter; elytra shorter, parallel, fully a fifth wider than the prothorax, the apex rapidly obtuse, the oblique sinus feebler, almost obsolete, the humeri not at all denticulate, the striæ fine but groove-like as usual, the intervals flat or very nearly, the discal puncture small, at three-fifths, the minutely punctulate apical part of the alternate intervals very short and indistinct, the usual row of large punctures on the seventh interval at apex unusually distinct; basal joint of the hind tarsi but little longer than the next two or the fifth. Length (♀) 9.6–11.0 mm.; width 3.9–4.3 mm. California (San Francisco Bay).

sericatus n. sp.

16—Prothorax shorter, one-half wider than long; elytra broad, posteriorly dilated and widest somewhat behind the middle, densely opaque in both sexes and almost equally. Body stout, moderately convex; head minutely, sparsely punctulate throughout, the rugulosity not obvious, the foveæ well developed, deep and slightly linear; eyes strongly convex, the antennæ rather stout, black almost throughout; prothorax strongly rounded at the sides anteriorly, the sides strongly converging and straight posteriorly, minutely sinuate just at the angles, which are acutely subprominent; apex deeply sinuate, not very obviously narrower than the base; surface broadly and unusually feebly convex, rapidly declivous for a short distance at the sides to the rather narrow and deeply concave gutter, which does not broaden posteriorly but continues to the basal angles; disk punctured throughout, the punctures fine and sparser centrally, very dense and subcoalescent basally, the admixed coarse punctures of the sides, characterizing the preceding section, not visible; foveæ large but very shallow; stria fine but distinct, attaining apex but not the base; elytra a little less than one-half longer than wide, almost parallel (♀), posteriorly inflated (♂), fully two-fifths wider than the prothorax, broadly obtuse behind, the sinus very distinct though not deep; striæ fine but deep and cleft-like, the scutellar very long, the intervals not quite flat, the discal puncture small, at three-fifths; basal joint of the hind tarsi as long as the next two, distinctly longer than the fifth; male with two apical abdominal setæ, the female with four as usual. Length (♂♀) 11.3–13.0 mm.; width 4.3–5.2 mm. California (northern coast regions). [*A. brevicollis* Lec.]..... **consobrinus** Lec.

Prothorax not so short, always less than one-half wider than long; elytra relatively not so broad and always parallel, generally very shining (♂) to more or less opaque (♀)..... 17

17—Apical sinus of the elytra nearly obsolete, barely visible; elytral intervals not more convex apically, remaining perfectly flat. Body small in size, moderately convex, the head and pronotum (♀) strongly

shining, the elytra densely opaque; head with the minute sparse punctulation almost obsolete, the vertex medially rugose, the foveæ, rather large, linear, flexed abruptly and strongly inward in the type; antennæ extending almost to the thoracic base though unusually stout, blackish, gradually paler apically, the basal joint partially testaceous; prothorax rather strongly rounded at the sides, the latter converging and broadly, feebly sinuate posteriorly, the hind angles barely perceptibly more than right and with their tips very finely blunt; surface rather more convex than in the preceding and more deeply declivous at the sides to the similar narrow and deep gutter, which remains unmodified almost to the base, the large elongate-oblong, feeble and densely punctate foveæ separated from the sides by a strongly convex prolongation of the general surface, this, as well as the entire surface except the foveæ, extremely finely, sparsely and inconspicuously punctulate; stria very fine; elytra not quite one-half longer than wide, parallel, very obtuse at apex, fully a fifth wider than the prothorax, the striæ very fine and shallow, the scutellar long, the intervals perfectly flat; dorsal puncture at three-fifths distinct; seventh interval with only one puncture, which is at the apex. Length (♀) 11.2 mm.; width 4.3 mm. California (San Francisco).....**obsolescens** n. sp.

Apical sinus moderately deep and always very distinct.....18

18—Antennæ slender.....19

Antennæ notably stout in both sexes.....20

19—Body small in size and unusually slender; head almost completely impunctate and with but few feeble rugulæ, the foveæ linear and evenly arcuate, turning outward from the base; antennæ extending far behind the thoracic base, blackish throughout, the testaceous basal joint with a black macula; eyes only moderately prominent; prothorax moderately convex, steeply descending to the unusually fine reflexed edge anteriorly, the gutter gradually increasing somewhat in width posteriorly, extending to the basal angles, which are right and sharply defined but not at all prominent; sides rounded, converging and straight posteriorly; apex only feebly sinuate, narrower than the base, which is very feebly sinuate from side to side; surface finely, sparsely punctate and with transverse wavy lines, closely punctate throughout basally and especially in the long, broadly impressed and unusually deep foveæ, which are separated from the sides by a rather narrow convexity; median stria rather strong and entire; elytra fully one-half longer than wide and only about a sixth wider than the prothorax, parallel, obtuse and strongly sinuate at apex; striæ not very fine, deep, the scutellar long and coarse, the intervals flat laterally, slightly convex suturally, all sericeo-opaculate though somewhat shining and with excessively minute suffused and scarcely discoverable punctulation, the puncture at three-fifths distinct; hind tarsi unusually slender, the basal joint barely longer than the fifth. Length (♂) 10.0 mm.; width 3.4 mm. California (San Diego),—Dunn.....**angustus** n. sp.

Body larger and not quite so slender, though more slender than in *californicus*, strongly shining throughout (♂), the elytra (♀) rather

shining but distinctly alutaceous; head smooth, very shining and virtually punctureless, the foveæ linear and outwardly arcuate as in the preceding, the antennæ nearly similar; eyes more convex in the male than in the female; prothorax rounded at the sides, the latter converging and broadly, feebly sinuate posteriorly, the basal angles obtuse but with the apices slightly prominent, forming a right angle; base broadly and very feebly sinuate medially, not very obviously wider than the apex, which is moderately sinuate; surface very shining, impunctate centrally, the punctures laterally and apically extremely fine, sparse, those basally also very fine and sparse throughout except in the rather large and subelongate, moderately deep foveæ, where they are strong and dense; marginal gutter fine, deep and nearly constant in form from apex to base, obsolete only at the basal angles; stria fine but rather deeply impressed, subentire; elytra nearly one-half longer than wide, parallel, with broadly arcuate sides and obtuse and rather strongly sinuate apex, fully a fifth wider than the prothorax; striæ and intervals nearly as in the preceding, except that at apex the intervals become more evidently convex than in *angustus;* hind tarsi moderately slender, the basal joint much longer than the fifth in both sexes. Length (♂ ♀) 10.8–11.8 mm.; width 3.8–4.3 mm.; Oregon..... **oregonus** n. sp.

Body still noticeably broader than in *oregonus*, though not stout, more parallel, the head nearly similar but with slightly larger eyes, the foveæ well developed and of different form, being rounded and very deep to angulate; prothorax rounded at the sides, the latter converging posteriorly and broadly, feebly sinuate, the basal angles slightly obtuse and sharply defined though scarcely at all prominent; surface strongly shining and with extremely fine or obsolete punctures everywhere except in the large, centrally very deep foveæ, where they are very coarse and coalescent, gradually becoming finer outwardly, the marginal gutter differing somewhat in being very fine anteriorly, sensibly increasing in width posteriorly, then becoming obsolete toward base; apex rather deeply sinuate, a little narrower than the rectilinear base; elytra long, rather more than one-half longer than wide, parallel, with feebly arcuate sides and rather obtuse apex, the sinus unusually distinct; striæ and intervals nearly as in *oregonus* in both sexes, the very minute sparse suffused punctulation is however rather evident (♂) or scarcely traceable (♀); hind tarsi nearly similar. Length (♂ ♀) 9.6–12.0 mm.; width 3.8–4.7 mm. California (abundant about San Francisco, Sta. Cruz and in Humboldt Co.). [*A. confusus* Lec.]. . **californicus** Dej.

Body larger than in *californicus* and still stouter, the prothorax relatively more developed and the eyes distinctly larger, the central rufous spot of the vertex strongly transverse; head finely, sparsely and obsoletely punctulate, the foveæ rather large, deep, rugulose and angulate, the epistoma with many longitudinal wrinkles; antennæ slender, extending well behind the thoracic base even in the female; prothorax in outline, structure and sculpture almost as in *californicus*, but with the anterior transverse impression medially deeper and very obvious, the stria fine, coarser basally, obliterated apically;

fine punctures of the general surface more distinct, the very large and deep, rugosely punctured foveæ and the narrow concave side margins almost similar, the latter not quite so broad; elytra nearly similar but with the striæ suturally more deeply impressed and with more convex and more shining intervals, the latter laterally not quite flat, opaque and finely, suffusedly but not distinctly punctulate throughout; apical sinus rather deep and distinct; hind tarsi nearly similar. Length (♀) 12.7 mm.; width 5.0 mm. Oregon (without further indication of locality)..... **sinuatus** n. sp.

20—Form and facies nearly as in *californicus* but a little larger and somewhat stouter, very shining throughout (♂), or with the elytra opaculate and less deeply striate (♀); head nearly as in *californicus* but relatively somewhat larger and with slightly larger eyes, the antennæ notably thicker in both sexes; prothorax as in *californicus* but relatively larger and with the minute sparse punctulation everywhere barely traceable, the foveæ similar, rather deep and also coarsely punctate, gradually finely so toward their boundaries, the surface between them and the sides more convex and much more minutely punctulate; marginal gutter of the same kind but finer, extending nearly to the base; elytra as in *californicus* but broader, not quite so elongate, the tarsi nearly similar, the basal joint with a few punctures on its upper surface. Length (♂♀) 12.3–12.8 mm.; width 4.6–4.8 mm. Utah (Provo),—Wickham. Six examples..... **paganicus** n. sp.

Form much less elongate than in either *californicus* or *paganicus*, only moderately convex; head relatively smaller than in *californicus* but otherwise nearly similar, the antennæ notably shorter and thicker; prothorax nearly similar in outline but less transverse, only about a third wider than long, the marginal gutter not so broad as it is in *californicus*, the convexity between the foveæ and the sides narrower and stronger, the foveæ narrower, rather deep, closely but not so coarsely punctate, the entire surface, excepting the foveæ, almost devoid of punctuation; elytra only about two-fifths longer than wide, parallel, with feebly arcuate sides and very obtuse apex, relatively much wider than usual, being fully a third wider than the prothorax, with the base at the sides broadly exposed; surface very smooth, densely opaque and without trace of minute punctulation, the striæ fine, the intervals flat, slightly convex and with deeper striæ near the suture basally but only slightly so apically; metasternum laterally with fine punctuation but scarcely rugose; hind tarsi of the usual form in the preceding species. Length (♀) 10.8 mm.; width 4.2 mm. Nevada (Reno). A single example taken by the writer. **humeralis** n. sp.

21—Form oblong-suboval, rather convex, shining, blackish throughout above (♂), with more or less distinct metallic green lustre, or (♀) less metallic above, with the elytra sericeo-opaque; under surface and femora black when mature, the tibiæ, tarsi and epipleura rufescent; head rather small, half as wide as the prothorax, smooth, the foveæ rather large, deep, irregularly subtriangular; antennæ rather slender, nearly black, the two basal joints bright testaceous; pro-

thorax differing from any of the preceding in being perfectly parallel and straight at the sides, the latter rounding only at apex, one-half wider than long, the apex deeply sinuate, with narrowly rounded angles and nearly three-fourths as wide as the transverse base, the basal angles absolutely right, very sharply defined, not at all blunt though not prominent; surface convex, shining, subimpunctate except on the narrowly deplanate sides and toward base, especially in the large deep and rather rounded foveæ, the stria fine; elytra two-fifths longer than wide, a fourth wider than the prothorax, parallel, obtuse at tip, the sinus broad and feeble but distinct; striæ fine, deeper suturo-basally, the intervals flat or nearly so, the scutellar stria long, the puncture at three-fifths; surface without trace of any sort of punctuation, except the marginal foveæ; hind tarsi with the basal joint as long as the next two and equal to the fifth. Length (♂ ♀) 9.0–10.0 mm.; width 3.8–4.4 mm. Northern California. Abundant. **amaroides** Lec.

22—Body small in size, oblong-oval, rather convex, shining above, with greenish-bronze lustre, the elytra (♀) sericeo-opaculate; under surface and legs colored as in the preceding; head very small, less than half as wide as the prothorax, smooth, with deep foveæ curving outwardly, the eyes prominent; antennæ slender, fuscous, the three basal joints pale testaceous; prothorax two-fifths (♂) to one-half (♀) wider than long, the sides evenly and moderately arcuate and converging almost evenly from base to apex, the latter rather feebly sinuate, with broadly rounded angles and only three-fifths as wide as the base, which is transverse and finely margined, with the angles right, their apices very finely blunt; surface finely reflexed anteriorly at the sides, the margin gradually rather wide and flat posteriorly and sparsely punctate, the foveæ large, shallow, closely punctate, the remainder of the basal parts very finely punctulate and the rest of the disk wholly impunctate, though with numerous transverse wavy rugulæ; elytra rather less than one-half longer than wide, oblong-oval, slightly wider than the prothorax, the sides evenly and moderately rounded to the thoracic angles, without exposed humeri; apex gradually obtuse, the sinus short, very feeble; striæ fine, the scutellar long; intervals flat or nearly so, the puncture distinct and at three-fifths, the disk without trace of other punctuation except the lateral foveæ; hind tarsi slender, the basal joint longer than the next two or the fifth. Length (♂ ♀) 7.8–8.5 mm.; width 3.3–3.7 mm. District of Columbia to Kansas. Abundant. [*A. subæneus* and *obscurus* Lec.] . . . . . **cœnus** Say

Body narrower in outline than the preceding and rather more convex, black, the upper surface with greenish or coppery-green metallic lustre, the elytra (♀) barely at all alutaceous, the side margins of the pronotum diaphanously pale; under surface black, the epipleura obscure, the legs paler, rufous; head relatively much larger than in *cœnus*, with remarkably large and prominent eyes, three-fifths as wide as the prothorax, the foveæ moderate, sublinear, very deep; antennæ slender, blackish, with the two basal joints pale; prothorax one-half wider than long to a little less, the sides very evenly and

moderately rounded from base to apex, the latter sinuato-truncate, with rounded angles and three-fourths as wide as the base, which is transverse and coarsely beaded, with the angles slightly obtuse but with their apices only very finely blunt; surface somewhat coarsely reflexed and punctulate at the sides, almost evenly so throughout the length, the foveæ large, shallow, very coarsely punctate toward their centres, the remainder of the surface smooth and not punctate, the stria fine but rather strong; elytra oval, very gradually ogival behind, with parallel arcuate sides, a little more rounding at base, nearly one-half longer than wide, the sinus very oblique, obsolete; striæ coarse, deep and abrupt, the scutellar long, the intervals flat, the surface otherwise as in *cœnus;* hind tarsi rather more slender, the first joint longer than the fifth. Length (♀) 8.8–9.0 mm.; width 3.3–3.6 mm. District of Columbia to Texas (Austin). Apparently not at all abundant.....**lætus** Dej.

The species described by LeConte under the name *similis* (Ann. Lyc., V, p. 183) I cannot identify. The description is as follows:

A. similis Lec.—Oblong, "minus convexus" [the species immediately preceding in the rather depressed *consobrinus*], black, the head slightly punctulate; prothorax punctulate, one-half wider than long, not narrowed posteriorly, the finely depressed margins evanescent behind the middle; hind angles right, the base slightly impressed, densely punctulate; elytra finely striate, the intervals almost flat, the third impunctate [!]; first joint of the antennæ rufo-piceous, with a fuscous macula. Length 11.5 mm. Oregon.

If the prothorax is really not at all narrowed posteriorly, and the statement that the hind angles are right tends to confirm the language of the description in that respect, it would cause *similis* to depart distinctly from any other species known to me. G. H. Horn states that both *similis* Lec., and *puncticollis* Chd., are synonyms of *semipunctatus* Lec., though the latter is of a much more recent date than *similis*. As to *puncticollis* Chd., described as coming from Vancouver Island, the author states that the prothorax in the male type is punctured throughout, showing that it belongs to the *semipunctatus* section, that the hind angles of the prothorax are "parfaitement droits" and that the elytra are not at all punctulate. As the alternately punctulate intervals are a very obvious feature in the male of *semipunctatus*, there is reason to believe that *puncticollis* cannot be that species, and it is my belief that it is a synonym of *similis* Lec. There is also reason to believe that *similis* is a valid species, with virtually parallel sides of the prothorax, and not very closely related to *semipunctatus*. I think

that the statement that the third interval is impunctate is clearly a misprint for unipunctate. The same mistake occurs in the original description of *confusus*, which, from the published characters and the note of its abundance at San Francisco, must be identical with *californicus*, in which I have seen no instance in a large series where the discal puncture is wanting. In fact the single discal elytral puncture is an extremely constant feature throughout the genus. In *lodingi*, which is unknown to me in nature, this important puncture is however said to be wanting; that species is aberrant also in its great size of body.

Xestonotus Lec.

Some question has been raised as to the propriety of maintaining this genus distinct from *Anisodactylus*, and in reality it is very closely allied, but there is a rather radical departure in the form of the ligula, which, considering the very minute punctiform frontal foveæ, which are exactly as in *Harpalus*, complete absence of the rufous spot on the vertex, another harpaloid character, broadly rounded basal angles of the prothorax and very posterior position of the discal elytral puncture, would seem to warrant its retention, at any rate as not less than a very well marked subgenus of *Anisodactylus*. The only known species is the following:

Body oblong, stout, moderately convex, deep black and shining, the elytra (♂) feebly or (♀) strongly alutaceous; under surface and legs throughout deep black; head rather large, two-thirds as wide as the prothorax, the eyes very moderate, not very prominent; antennæ slender, piceous, the basal joint pale; surface very smooth, the epistomal suture excessively feeble, sometimes obsolescent; ligula slender, not at all enlarged at apex, the paraglossæ fully as long or somewhat longer and very obtuse at tip; prothorax short, one-half to three-fifths (♀) wider than long, the sides parallel, evenly and rather strongly arcuate; apex broadly and very deeply sinuate, with advanced though rounded angles and only a little narrower than the base, which is transverse, rounding laterally toward the very broadly rounded angles; surface very finely reflexed at the sides in about apical half, the gutter broadening, becoming feeble and disappearing at basal two-fifths on the large latero-basal, finely but densely punctate flattened area, the foveæ large, very broad and shallow, with some coarser punctures in addition to the finer; remainder of the disk impunctate, the stria fine, entire and distinct; elytra two-fifths longer than wide, parallel, obtusely rounded at apex, barely visibly wider than the prothorax, the sides feebly

arcuate; sinus feeble but distinct; striæ fine, the scutellar long, usually free; intervals flat throughout (♀) or nearly so (♂), the entire surface with traces of excessively minute punctulation, not visible in the female, the lateral line of foveæ subinterrupted medially, the discal puncture strong, at apical fourth; hind tarsi slender, glabrous above, the first joint fully as long as the next two and much longer than the fifth; spur of the anterior tibiæ very slender and simple. Length (♂ ♀) 10.0–10.8 mm.; width 3.8–4.3 mm. Rhode Island to Iowa. Abundant. [*Selenophorus lugubris* Dej. (♀); *Harpalus manhattanis* Csy. (♀)]..... **lugubris** Dej.

For some reason, not stated, this species was not considered by Dr. Horn in his sketch of *Anisodactylus* (Proc. Am. Phil. Soc., 1880, p. 162), though there is better reason for considering it a part of that genus than there is to include *Dicheirus*. The female type was placed in *Selenophorus* by Dejean, solely because of the very slender ligula and absence of mentum tooth, but the three series of elytral punctures constitute a more decisive generic mark of *Selenophorus* than the structure of the mouth parts. The fact that no one, observing solely the female, would probably think of placing the species in *Anisodactylus*, is at least one reasonable proof of its generic isolation.

Amphasia Newm.

In this genus, which is again monotypic, the mouth parts are almost exactly as in *Xestonotus*, the ligula being very slender and not in the least expanded at apex and the paraglossæ fully as long, rather broad and obtuse at apex, but otherwise, and especially in type of coloration and sculpture, which may become of generic significance in some groups of Carabidæ, there is no similarity whatever. The type of *Amphasia* may be described as follows:

Form oblong, rather feebly convex, shining throughout in both sexes, pale testaceous in color throughout the body, legs and trophi, except that the elytra are dark brown and the entire sterna and parapleura of the hind body deep black; head rather small and long, one-half as wide as the prothorax, the neck somewhat constricted behind the moderate though very prominent eyes, the foveæ very small but only moderately deep and elongate-oval; antennæ slender, rather pale brown, the two basal joints paler and testaceous; prothorax two-fifths (♂) to one-half (♀) wider than long, the sides parallel and evenly, somewhat strongly arcuate; apex deeply sinuate, with advanced and only rather narrowly rounded angles and distinctly narrower than the base, which is transverse, rounding laterally, the angles very broadly rounded, the fine basal bead usually broadly

interrupted medially; surface with coarse sparse punctures apically and laterally, which become scarcely at all smaller and very dense latero-basally, the lateral gutter rather coarse, disappearing on the flattened latero-basal area at about basal third, the foveæ extremely shallow and vague; elytra not quite one-half longer than wide, just visibly wider than the prothorax, with parallel and feebly arcuate sides and obtusely rounded apex, the sinus long and feeble but evident, the striæ fine but somewhat impressed, coarser and with rather convex intervals suturally, the intervals elsewhere feebly convex and all covered with rather dense confused punctuation, each puncture bearing a short fulvous hair, the punctures coarse suturally, finer elsewhere, the lateral line of foveæ not at all interrupted; discal puncture small, at three-fifths; hind tarsi slender, sparsely hairy above, the basal joint nearly as long as the next three combined, the second not quite as long as the fifth; abdomen finely, sparsely punctulate throughout. Length (♂♀) 8.5–10.0 mm.; width 3.0–4.0 mm. Long Island to Missouri. Abundant. [*A. fulvicollis* Newm., *Harpalus obscuripennis* Dej. and *Feronia interstitialis* Say]..... **interstitialis** Say

This species was also omitted in the review of Dr. Horn mentioned under *Xestonotus*, but *sericeus* Harr., was included.

Pseudamphasia n. gen.

While there is some similarity between this genus, also monotypic, and the preceding, due to the close punctuation and pubescence, the structure of the ligula is so different as to indicate that there is but little real affinity. The ligula is rather slender basally, but rapidly and very broadly expands apically to the broadly truncate apex; the paraglossæ are narrower than in *Amphasia* and narrowly rounded at tip. The terminal spur of the anterior tibiæ is simple and slender and the antennæ of the male extend nearly to basal fourth of the elytra. The fifth hind tarsal joint is relatively shorter than in any other species recalled at present. The type is as follows:

Body oblong-oval, very moderately convex, rather shining, black, the elytra feebly (♂) or densely (♀) sericeous; under surface and femora black, the tibiæ and tarsi testaceous; head rather short, slightly more than half as wide as the prothorax, with a few punctures basally and near the rather large shallow and somewhat vague foveæ, the eyes unusually large and very prominent; antennæ very slender, somewhat dusky-testaceous throughout; prothorax but little more than a third wider than long, the sides subparallel, evenly and rather strongly arcuate, the apex deeply sinuate, with advanced and but very narrowly rounded angles and much narrower than the base,

which is transverse medially, feebly arcuate laterally, the angles broadly rounded; surface strongly but rather sparsely punctured throughout, the punctures becoming dense in the large concavo-explanate latero-basal region, which probably represents the foveæ as these are wholly undefined; the marginal gutter is narrow anteriorly, gradually broader posteriorly, rather abruptly defined and closely punctate, disappearing at about basal two-fifths; the stria is extremely fine and broadly biabbreviated, the surface adjacent thereto somewhat flattened; elytra nearly one-half longer than wide, fully a fourth wider than the prothorax, the sides parallel and broadly arcuate, the apex obtusely rounded; sinus rather short, feeble but very distinct; surface densely, rather finely and uniformly punctate and minutely pubescent throughout, the striæ fine, the scutellar long, the intervals nearly flat throughout, 3–5–7 with scattered sparse coarser punctures throughout the length, which are distinct (♂) or feebly defined (♀), the discal substrial puncture small, at three-fifths; abdomen very finely and sparsely punctulate throughout; hind tarsi slender, with only very few hairs above, the basal joint longer than the next two combined and about as long as the last three. Length (♂♀) 8.8–9.8 mm.; width 3.3–4.0 mm. Rhode Island to Lake Superior and Louisiana. Abundant. [*Harpalus femoratus* Dej.]..... **sericea** Harr.

The coarsely and sparsely punctured alternate intervals of the elytra would ally the genus with *Anadaptus*, except that here the punctured intervals are 3–5–7, and not the alternate intervals beginning with the second as in *Anadaptus porosus;* this is a very singular and exceptional feature in *sericea*.

Dicheirus Mann.

We come here upon a series of generic types differing in a noteworthy way from those that precede in the short basal joint of the hind tarsi, either actually, due to the very much shorter tarsus, or relatively as in *D. piceus* and allied species, where the first joint is very much shorter than the next two combined; in species of the *dilatatus* type, the principal abbreviation of the tarsus appears in joints 2–4, so that the basal joint may still be as long as the next two combined or nearly so, although never longer and often shorter than the fifth. The tarsi in this genus are conspicuously and sometimes rather closely pubescent above, whereby in addition it differs from the genera that precede. The terminal spur of the anterior tibiæ is strongly trifid throughout. In general habitus it differs completely from *Anisodactylus* or any close relative of that genus, being smaller in size of body, narrow in form and constantly

having two series of setigerous punctures on each elytral interval, the series very close to the striæ as a rule. The two principal groups of *Dicheirus* differ from each other almost subgenerically as follows:

Body usually but feebly convex, the prothorax much narrowed basally and cordiform; ligula slender, though gradually somewhat broader apically, the paraglossæ not very broad, somewhat produced externally at apex, this apical part generally curving inward; palpi stout, the last two joints of the labial extremely unequal, the third scarcely three-fifths as long as the second, which is unusually elongate; joints 2–4 of the hind tarsi unusually abbreviated; body generally brown in color.....2

Body strongly and subcylindrically convex as a rule, the prothorax never more than very feebly narrowed posteriorly; erect hairs of the upper surface always very short; ligula and paraglossæ nearly as in the preceding section, the palpi much more slender, the third joint of the labial not very much shorter than the second; joints 2–4 of the hind tarsi not so abbreviated; basal joint of the antennæ not quite so thick; body generally deep black in color.....8

2—Hind angles of the prothorax obtuse, sometimes distinct, often rather rounded.....3

Hind angles sharply marked and subprominent.....7

3—Middle tarsi (♂) not dilated or pubescent beneath.....4

Middle tarsi (♂) with joints 2–4 pubescent beneath.....6

4—Species of very large size and more convex form, the sides of the prothorax opaque and impunctate beneath; form stout; hind angles of the prothorax obtuse; elytral intervals irregularly biseriately punctate; middle and posterior tibiæ (♂) coarsely and roughly tuberculate along the outer margin. Length (♂) 15 mm. California (Fort Tejon).....**strenuus** Horn

Species of much smaller size and more depressed upper surface, the prothorax punctured beneath, the tibiæ spinulose externally.....5

5—Body moderately stout, oblong, feebly convex, coarsely punctured, the punctures bearing long erect setæ, dark red-brown in color, the elytra sometimes nearly black; head nearly three-fifths as wide as the prothorax, rather constricted at base, the eyes moderate, prominent; surface coarsely, rather closely punctured throughout, the foveæ not evident; antennæ long, moderately slender, red-brown; prothorax barely a third wider than long, the sides rounded anteriorly, thence strongly converging, becoming straight to the basal angles, which are obtuse and broadly rounded; base transverse, much narrower than the broadly sinuate apex; surface almost even, slightly depressed latero-basally but not otherwise modified, the foveæ wanting; side margins very finely reflexed throughout, the disk everywhere coarsely, more or less sparsely and irregularly punctate; elytra not quite one-half longer than wide, parallel, slightly wider than the prothorax, very obtusely rounded at apex, the sinus obsolete; striæ fine, the scutellar rather long, perfectly free; intervals flat, with the punctures of the two series widely and irregularly

spaced, the usual discal puncture not visible; abdomen very finely, sparsely punctate throughout; hind tarsi rather stout, the first joint not quite as long as the next two together and about equal in length to the fifth, the hind tibial spurs slender and finely pointed. Length (♂♀) 7.5–10.0 mm.; width 2.8–3.7 mm. California (middle coast region). Abundant. [*D. hirsutus* Ménét.].

dilatatus Dej.

Body narrower, still more depressed and smaller in size, black, the edges of the pronotum finely pale, the under surface deep black, the legs short, bright testaceous; hairs borne by the dorsal punctures very short, stiff and erect; head nearly as in the preceding but about two-thirds as wide as the prothorax, rather closely and moderately coarsely punctate, with a large central area virtually impunctate; antennæ moderately long, testaceous, notably stout and gradually darker basally; epistoma with a single puncture at each angle; prothorax a third wider than long, the sides rounded, gradually rather strongly converging and becoming nearly straight basally, the angles very obtuse but not evidently rounded; base transverse, rounding laterally, fully as wide as the broadly and moderately sinuate apex; surface rather depressed, with moderately coarse sparse and somewhat unevenly distributed punctures throughout, the latero-basal area somewhat strongly depressed and foveiform; side margins very evenly and finely reflexed from apex to base; elytra in outline nearly as in the preceding, very broadly, circularly rounded at apex, without sinus and nearly a third wider than the prothorax, the striæ fine, the nearly flat interspaces with the series composed of rather small punctures, which are usually not very close-set and in general quite uneven in spacing; abdomen finely but rather strongly, not very sparsely punctulate; spurs of the hind tibiæ slender and pointed but rather short, the hind tarsi more slender than in the preceding, the basal joint shorter than the next two and barely two-thirds as long as the fifth. Male with the anterior tarsi dilated, densely pubescent beneath, the middle tarsi completely undilated and without trace of pubescence beneath. Length (♂) 7.8 mm.; width 2.9 mm. California (Lake Tahoe)..... **brevisetosus** n. sp.

6—Body similar in form to *dilatatus* but smaller and with the hind angles of the prothorax quite distinct, though not prominent, and the surface more densely punctured; prothorax beneath with but few coarse punctures and these not deep; hairs arising from all the punctures of the upper surface short and erect, the punctures of the elytral interstitial series regularly and closely placed; middle tarsi of the male with joints 2–4 pubescent beneath. Length 7.5 mm. California (San José). Not at all common..... **obtusus** Lec.

Body rather narrow, elongate, piceous, feebly shining, pubescent, the legs rufous; head very coarsely and deeply punctured and with long hairs, the epistoma with two larger setigerous punctures at each angle; prothorax a little wider than long, narrowed behind, the sides arcuate anteriorly, oblique posteriorly; hind angles distinct but not prominent; base slightly arcuate at each side; surface moderately convex, coarsely and deeply punctured, the punctures regularly

placed and bearing moderately long hairs; elytra a little wider than the prothorax, oblong, the sides very slightly arcuate; striæ fine, the intervals flat and regularly, closely and biseriately punctate, each puncture with a rather long semi-erect hair; prothorax beneath very coarsely and deeply punctate, the metasternum at the sides coarsely punctate; abdomen laterally more sparsely punctulate. Length 7 mm. California (San Joaquin valley). More slender than *obtusus* and with longer hairs..... **pilosus** Horn

7—Form oblong-elongate, rather longer and narrower than *dilatatus* but otherwise very similar in habitus, dark red-brown throughout above and beneath, except the elytra, which are always black; upper surface shining, the hairs long, fulvous, erect and bristling; head three-fifths as wide as the prothorax, with moderate eyes and somewhat long neck, which is very smooth transversely at base; surface almost uniformly, very coarsely but not closely punctate; antennæ long but rather thick, extending to basal fifth of the elytra; prothorax a fourth to third wider than long, the sides rounded anteriorly, oblique posteriorly, becoming deeply sinuate before the basal angles, which are consequently right, sharply defined and prominent; base transverse, much narrower than the feebly sinuato-truncate apex; surface with very coarse, deep, sparse and irregularly distributed punctures; margins very finely reflexed and without marginal gutter throughout the length; basal parts not at all modified; elytra about one-half longer than wide, just visibly wider than the prothorax, parallel, obtusely rounded at apex, without trace of sinus; striæ not very fine, deep, abrupt, the scutellar long, free; intervals nearly flat, shining (♀), the punctures of the series very coarse, widely and irregularly spaced, more irregularly disposed than in any other species and frequently confused; the intervals are alternately narrower and wider; on the narrower ones there is but a single medial series, either regular or irregular; abdomen finely, sparsely punctulate; joints 2–4 of the hind tarsi very short, the hind tibial spurs very slender and simple. Length (♀) 7.8–10.5 mm.; width 2.8–3.4 mm. California (San Diego). Six examples..... **angulatus** n. sp.

8—Elytra shorter, not one-half longer than wide, rather stout, moderately convex, dull black, the under surface piceous, the legs and antennæ rufous; head short, with moderate eyes, about two-thirds as wide as the prothorax, strongly and rather sparsely punctate, the punctures smaller but not wanting centrally, the epistoma with a single puncture at the angles, broadly impunctate medially; antennæ rather stout; prothorax as in *piceus* throughout but duller in lustre and not quite so convex; elytra also as in *piceus* but shorter, relatively much broader and duller in lustre, two-fifths longer than wide, fully a third wider than the prothorax, subparallel, with broadly arcuate sides and very obtuse apex, the sinus feeble but distinct; striæ fine, the scutellar long, the intervals slightly convex, the punctures of the two series rather small, widely and very irregularly spaced in the series; abdomen strongly, rather closely and only moderately finely punctate throughout; prosternum coarsely, closely

punctate at the sides. Length (♀) 8.4 mm.; width 3.3 mm. California (Valley of Eel River, Humboldt Co.)..... **alutaceus** n. sp.

Elytra always much more elongate, fully one-half longer than wide and relatively less broad, polished in lustre in both sexes, the anterior and middle tarsi (♂) dilated and densely pubescent beneath.....9

9—Body smaller, more slender, convex, black and shining, the under surface rather less deeply black, the abdomen apically, the legs and antennæ rufous; head fully two-thirds as wide as the prothorax, the eyes very moderate; surface moderately coarsely, deeply, rather sparsely and unevenly punctate, a large central space usually devoid of punctures; antennæ rather stout, the basal joint short, cylindric; prothorax two-fifths wider than long, the sides broadly arcuate, feebly convergent and less arcuate to straight basally; base transverse, fully as wide as the sinuato-truncate apex, arcuate laterally into and through the obtuse and rounded basal angles; surface rather convex, not modified basally, very finely reflexed at the sides, strongly, sparsely and irregularly punctate, the median stria very fine, unimpressed and subentire; elytra slightly wider than the prothorax, parallel, ogival at tip, the sinus extremely feeble, barely traceable; striæ fine, the intervals very feebly convex, subuniform in width, the two series of deep moderate punctures rather irregular, more or less widely spaced, the alternate intervals laterally tending to slightly greater convexity and more irregular series, the eighth stria sometimes almost obliterated; abdomen rather strongly and not very sparsely punctate, the sides of the prosternum with a mixture of coarser and finer punctures; first three joints of the hind tarsi decreasing uniformly in length, the first much shorter than the fifth. Length (♂♀) 7.6–8.8 mm.; width 2.9–3.2 mm. California (San Francisco Bay regions). Moderately abundant. [*D. villosus* and *irregularis* Mots. and *parallelus* Lec.; *brunneus* Mann. nec Dej.]. **piceus** Ménét.

A—Similar to *piceus* but slightly more slender, the head not quite so large, the pronotum with evident sublinear and moderately impressed basal foveæ, the elytral punctures finer and forming two almost perfectly even series, although very irregularly spaced in the rows; sides of the prosternum with moderately strong, sparse and uniform punctures. Length (♂) 8.5 mm.; width 3.0 mm. Utah..... **rupimontis** n. subsp.

B—Similar to *piceus* but much more slender, with smaller, less coarsely and very irregularly punctate head, the sides of the prothorax posteriorly very feebly sinuate, the obtuse hind angles rather less rounded, the surface with evidently less coarse punctures and more evident traces of broadly and feebly impressed basal foveæ; elytral punctures smaller and arranged in two more even series, somewhat as in *rupimontis;* hind tarsi slightly longer and decidedly more slender than in either of the preceding; prosternal punctures somewhat as in *piceus*. Length (♂) 8.5 mm.; width 2.8–2.85 mm. California (Trinity River and Redwood Creek, Humboldt Co.). **angustulus** n. subsp.

Body larger and much stouter than in *piceus* or any of its allied forms and

much more southern in habitat, deep shining black throughout; legs dark rufous, the antennæ moderately thick, somewhat obscure; head short, nearly as in *piceus* but with the coarse, deeply perforate punctures closer, wanting in a large central area; prothorax nearly as in *piceus* but with the sides rather less converging posteriorly, the basal angles very obtuse and evidently rounded, the punctures much more numerous and slightly coarser; elytra nearly similar but larger, more distinctly wider than the prothorax, the intervals nearly flat, with the punctures relatively not quite so large, similarly unevenly spaced in the series but with both series of all the intervals nearly even; under surface and hind tarsi almost as in *piceus*. Length (♂ ♀) 8.5–9.5 mm.; width 3.2–3.7 mm.; California (San Diego and on San Clemente Island). Fifteen examples.... **australinus** n. sp.

A—Similar to *australinus* but still larger and rather stouter; head and prothorax nearly similar, the punctures of the latter less close-set as a rule, the basal angles obtuse and rounded; elytra nearly as in *australinus* throughout, the series almost even, the general surface very shining in both sexes; abdominal and prosternal punctures sparser; hind tarsi nearly similar and a little shorter in the female than in the male. Length (♂ ♀) 8.5–11.0 mm.; width 3.2–4.0 mm. Guadalupe Island. Fifteen examples... **insularis** n. subsp.

Body smaller than in either of the two preceding forms and somewhat less convex, very pale testaceous in color throughout in the type, which is doubtless immature, shining; head fully two-thirds as wide as the prothorax, with sparse and very irregularly distributed punctures, coarse laterally, smaller medially; prothorax only about a fourth wider than long, the sides more rounded anteriorly than in *piceus* and rather more converging basally, though otherwise nearly similar and with obtuse and rounded basal angles, but more sparsely, less coarsely punctate, with the punctures in the feebly subimpressed basal foveæ coarser and closer, the surface between this area and the sides more narrowly and strongly convex; elytra nearly as in *piceus* but with finer punctures of the series, the latter nearly regular but loose; punctuation of the under surface nearly as in *piceus*, the anterior tarsi (♂) rather less broadly dilated, the hind tarsi nearly similar. Length (♂) 7.0 mm.; width 2.5 mm. Arizona. A single example. **decoloratus** n. sp.

The two principal groups in this genus are very clearly defined and have somewhat the nature of subgenera. The species are much more closely allied among themselves in the *piceus* than in the more diversified *dilatatus* section. There are undoubtedly a considerable number of forms closely allied to *piceus*, and I have ventured to define a number of them above, but have been unable to identify any of them with *villosus* or *irregularis* of Motschulsky, the above synonymy being that of Horn; *parallelus* of LeConte is however typical *piceus*. *D. pallidus* Mots., is *Agonoderus rugicollis*

Lec., of the Acupalpini. The following species cannot be placed properly in the table given above; the table is based upon that of Dr. Horn, for the reason that so many of the species are unknown to me in nature:

D. immanis Horn. (*Anisodactylus*)—Oblong, depressed, piceous, feebly shining and pubescent, the legs rufous; head coarsely but not deeply punctate, with short erect hairs, the epistoma with one setigerous puncture at each angle; prothorax broader than long, narrowed posteriorly, the sides in front arcuate, posteriorly oblique, the hind angles distinct but not prominent; base on each side slightly arcuate; surface feebly convex, coarsely but not deeply punctate and with very short erect hairs; elytra wider than the prothorax, oblong-oval, the sides slightly arcuate; striæ fine, the intervals flat, rather finely and closely, biseriately punctulate and with very short erect hairs; prothorax beneath with a few coarse punctures in front; abdomen and sides of metasternum sparsely punctulate; hind tibiæ with short broad spatuliform spurs. Length 8.5 mm. California (San Joaquin Valley).

The author states that he is disposed to regard the peculiar formation of the hind tibial spurs as specific, because he had before him two perfectly similar specimens, both females. The characters given fit those of *brevisetosus* very well, that species being founded upon a single male, which however has perfectly normal and slender, finely pointed hind tibial spurs; as there is no trace of dense hairs on the under surface of the middle tarsi, it cannot be *obtusus* Lec. It would be interesting to observe the male of *immanis*.

The following species is also unknown, beyond the unique type in the Dejean collection; the description is curtailed from that of Dejean:

D. brunneus Dej. (*Harpalus*)—Oblong-ovate, subparallel, subpubescent, nigro-piceous, the antennæ and legs rufous; head and prothorax deeply punctate, the prothorax subquadrate, slightly narrowed posteriorly, the hind angles right; elytra striate, the intervals with two lines of impressed punctures; hairs of the upper surface sparse and moderately long; punctures of the head coarse and very dense; the prothorax is only a little wider than long, feebly rounded at the sides, feebly narrowed posteriorly and rather convex, having coarse deep punctures, which are very dense and often coalescent; the punctures of the binary elytral series are moderately close-set; there is but a single series on the sutural interval and the ninth has numerous punctures placed without order. Length (♀) 6 mm.; width 2 mm. California. Sent to Count Dejean by Eschscholtz.

This is evidently different from any species known to me, but may be placed just after *decoloratus* at the end of the table; it

differs profoundly from that species in the very small size, slender form and dense or coalescent punctures of the pronotum. That it belongs to the *piceus*, rather than the *dilatatus*, section of the genus, I think is sufficiently evident because of the laterally feebly rounded and but slightly basally narrowed prothorax. It certainly cannot be allied in any way closely with *angulatus*, where the thoracic punctures are sparse and the size much larger. It is a very interesting species that it is hoped may be rediscovered in the course of time.

Anadaptus n. gen.

The body here is more or less narrowly elongate-suboval, strongly convex, with cordiform prothorax, having the basal angles sharply marked as a rule and the elytral striæ deeply impressed, except in some of the Pacific species, where the striæ are feebler and the strial intervals more or less punctate, never serially however as in *Dicheirus* but confusedly over their entire breadth. The ligula is moderately wide, gradually and only slightly broadening to the apex, the paraglossæ with the outer part of the apex prolonged and sometimes curling inward. The species have a peculiar habitus which indicates at a glance that they constitute a genus different from *Anisodactylus*, where they have been assigned hitherto; I have but little doubt that the genus is desirable in the present state of taxonomy and therefore valid. The species are moderately numerous, those known thus far being the following:

Elytral intervals not alternately punctate; body partially pale in color, never metallic in lustre.....2
Elytral intervals alternately punctured throughout their width; body entirely dark in color, with more or less obvious metallic lustre...5
2—Epistoma with a single puncture at each angle.....3
Epistoma with two or three punctures at each anterior angle.....4
3—Form (♀) oblong-oval, only moderately convex, black above and beneath, excepting the elytra, the fine thoracic margins diaphanously pale; femora blackish, the tibiæ, tarsi and epipleura testaceous; head rather short, fully two-thirds as wide as the prothorax, with prominent eyes, outwardly arcuate lineiform foveæ and rather short blackish, though basally pale, antennæ; surface smooth, punctured at the sides basally; prothorax a third wider than long, the sides broadly rounded, moderately converging and just visibly sinuate basally; apex broadly sinuate, equal to the base, which is transverse, becoming arcuate between the end of the foveæ and the angles, which are somewhat obtuse but sharply marked and as a rule minutely

subprominent; surface very smooth and polished, with rather fine but deep entire stria and finely reflexed side margins from apex to base, the foveæ elongate, lineiform but broadly and very deeply impressed and finely, densely punctulate, the surface between them and the sides narrow and strongly convex; elytra oblong-oval, two-fifths longer than wide, a third wider than the prothorax, with parallel arcuate sides and obtuse apex, the sinus short but rather deep; surface opaculate, pale tawny yellow, with a large common blackish cloud, the striæ fine, the scutellar long, the intervals flat, bearing some short hairs laterally and apically, the punctulation however not distinct; abdomen with some scattered fine punctulation toward base of each segment except the last; basal joint of the hind tarsi much shorter than the fifth. Length (♀) 9.2–10.2 mm.; width 3.7–4.0 mm. Utah (Provo),—Wickham. Four examples.

nivalis Horn

Form much narrower, rather more convex, small in size, black throughout above and beneath, the legs black, the elytra and epipleura uniform pale red-brown; head nearly as in the preceding but smaller; maxillary palpi black, with pallid apex; antennæ rather short and stout, black, with pale basal joint; prothorax two-fifths wider than long, nearly as in *nivalis* throughout, except that the base is rectilinearly transverse throughout, the sides posteriorly more sinuate, the basal angles accurately right and sharply marked but not prominent and the extremely deep basal foveæ shorter and more rugose; elytra nearly one-half longer than wide and a fourth wider than the prothorax, obtuse at apex, parallel, the sides but slightly arcuate; sinus very feeble though evident; surface with a few short hairs along the sides and at apex, the striæ not very fine, rather deep, the scutellar long, the intervals feebly convex, alternating very slightly in width, the discal puncture at apical third; metasternum finely but distinctly, rather closely punctured laterally; abdomen without evident punctulation, except the usual post-coxal; hind tarsi with the basal joint but little shorter than the fifth. Length (♂) 8.0 mm.; width 3.0 mm. California . . . . . **parvulus** n. sp.

4—Body larger, oblong-suboval, strongly convex and very shining throughout in both sexes, black above and beneath, the sides of the pronotum, rather broadly and sharply, and all but a broad sutural feebly defined black region on the elytra attaining the base, pale testaceous, the epipleura, entire legs and antennæ testaceous; head with a nubilous red spot, smooth, impunctate, with prominent eyes and slender antennæ, the foveæ rather coarse, very deep, somewhat irregular; mandibles bright rufous, black apically; prothorax not quite one-half wider than the head, not quite one-half wider than long, the sides broadly rounded anteriorly, rather strongly converging and feebly sinuate basally, the angles somewhat more than right, very sharply marked and minutely subprominent; apex broadly and moderately sinuate, somewhat wider than the base; surface with very minute punctulation apically and stronger punctures throughout basally, finer and sparser medially but rather coarse and dense in the foveæ, which are less abruptly linear and not so deep as in

the two preceding, the surface laterally only feebly convex, the marginal gutter rather coarse, deep and even throughout the length, the stria distinct and subentire; elytra fully one-half longer than wide and a fourth wider than the prothorax, parallel, with feebly arcuate sides and obtuse apex, the sinus short and rather deep, rendered very distinct by the obtuse prominence limiting it anteriorly; surface glabrous throughout, rather finely but very deeply striate, the sutural stria long and deep; intervals strongly convex, the discal puncture strong and deep, at three-fifths; abdomen with but few fine punctures medially; hind tarsi stout, feebly tapering, the basal joint unusually thick (♀), much shorter than the fifth. Length (♂ ♀) 10.2–12.0 mm.; width 4.0–4.6 mm. Pennsylvania to Wisconsin and Missouri. Abundant..... **discoideus** Dej.

Body much smaller though otherwise nearly similar, except that the pale lateral part of the pronotum is limited to the diaphanous reflexed margin and the cloud-like darker area of the elytra broader and not approaching the base, sometimes extremely faint and nubilous; lustre shining (♂) or with the elytra subalutaceous (♀); head nearly as in the preceding, except that the eyes are less prominent, the foveæ rather more elongate and outwardly arcuate and the antennæ fusco-testaceous, with two basal joints paler; prothorax as in *discoideus* throughout, except that there are numerous wavy transverse rugulæ, the basal punctures finer, the apical even more obsolete, the latero-basal surface more convex and the basal angles not quite so sharply marked and not at all prominent; elytra two-fifths longer than wide, about a fifth wider than the prothorax, the parallel sides evidently arcuate, the apex obtuse, the sinus only very feeble though evident; striæ fine, feebly impressed, the intervals feebly convex, with a few very minute hairs apically, the puncture similarly at three-fifths; abdomen with few basal and subbasal punctules medially; hind tarsi nearly as in *discoideus*. Length (♂ ♀) 8.8–10.0 mm.; width 3.4–3.9 mm. Rhode Island to Iowa. [*A. sanctæcrucis* Fabr.?]..... **baltimorensis** Say

5—Punctures of the alternate intervals confined to the apical part of the elytra; form nearly as in the preceding but rather more convex, dark in color, the upper surface with metallic lustre varying from violaceous to greenish, the under surface and legs piceous; prothorax nearly as in *baltimorensis* but less transverse, more convex and with the basal regions less punctured; elytra also similar in general form but more parallel, the striæ fine; intervals flat, 2–4–6 distinctly punctured at apex. Length 8.5–9.5 mm. Colorado to California and Oregon. Apparently not common..... **pitychrous** Lec.

Punctures of the alternate intervals extending with equal density and distinctness from apex to base; body elongate-suboval, strongly convex, shining, the elytra (♀) but very feebly alutaceous, deep black throughout, the elytra generally with feeble greenish or greenish-brassy lustre; head rather more than two-thirds as wide as the prothorax, with only moderately prominent eyes and rather fine, outwardly arcuate foveæ, the surface smooth though with numerous punctures broadly toward the posterior part of the eyes

and a few scattered near the foveæ; antennæ slender, piceous, paler basally; prothorax a third wider than long, the sides obtusely subprominent near the middle, thence feebly arcuate and subparallel anteriorly, moderately converging and feebly sinuate in basal half, the base transverse, about as wide as the feebly sinuate apex; basal angles slightly obtuse, moderately sharply defined or subprominent; surface with rather coarse and sparse punctures apically and basally, the foveæ acutely linear and deep along the bottom but broadly impressed and strongly, densely punctate and rugose; elytra nearly one-half longer than wide and fully a fourth wider than the prothorax, parallel, with feebly arcuate sides and obtuse apex, the sinus notably deep and strongly defined externally; surface with small sparse hairs arising from the punctures of the alternate intervals, the latter flat, the smoother intervals feebly convex and frequently with a few irregular punctures posteriorly, the discal puncture small, at two-thirds; abdomen with numerous fine punctures toward the bases of the segments; hind tarsi filiform, rather slender, the first joint about as long as the fifth. Length (♂♀) 8.8–10.7 mm.; width 3.2–4.0 mm. Northern California. Twelve examples. [*A. sublævis* Mots., *alternans* Lec., *Harpalus alternans* Mots.?, *A. viridescens* Lec., *rudis* Lec. and *lecontei* G. and H., fide Horn]. . . . . **porosus** Mots.

A—Similar to *porosus* but brassy above and with the punctulation of the alternate elytral intervals less close-set. Length 9.2 mm. New Mexico (Sante Fé). [*A. chalceus* Lec.]. . . . . **chalceus** Lec.

As may be noted, the species are arranged in accordance with primary characters selected by Dr. Horn in the paper previously mentioned. I have identified *nivalis* from description and do not have the male, but my material in all probability represents that species correctly, although there is reason to believe that the author included more than one in his diagnosis; the above outline of *pitychrous* Lec., is also drawn from that given by Horn.

This is one of the most interesting genera of the Anisodactylini and the outward suggestion of *Daptus* may not be so very fanciful after all, for the hind tarsi in *discoideus* are remarkably thick at base and taper gradually, very much as they do in *Geopinus*—this being another instance of the parallelisms that constantly recur throughout the Harpalinæ;—the tapering hind tarsi recall *Geopinus* at one end and *Agonoderus* near the other end of the series, as here arranged; in every other genus throughout the subfamily the hind tarsi are filiform.

Stilbolidus n. gen.

The species of this genus have given rise to some divergence of opinion, Bates assigning the type to *Anisotarsus*, while Horn main-

tained that it would be better placed in *Anisodactylus*. The former author came the closer to the real affinities involved but, as there are wide departures from both *Anisotarsus* and *Anisodactylus*, the best solution seems to be the erection of a distinct genus for the *Harpalus mexicanus* of Dejean and one or two allied species. The mentum is definitely and distinctly toothed as in *Anisotarsus*, the ligula long, slender, gradually but very feebly enlarged apically and not quite so long as the larger and very broad, apically very broadly obtuse, paraglossæ. The labial palpi are thick, with the third joint barely at all shorter than the second and rather rapidly, obtusely acuminate at tip. The terminal spur of the anterior tibiæ is very slender and perfectly simple, and the hind tarsi are rather short, pubescent above, with the basal joint shorter than the next two, though distinctly longer than the fifth, which is unusually short. It will be noticed that this formation of the anterior spur and hind tarsi is very different from the corresponding characters in *Anisodactylus*, which, in conjunction with the broad obtuse paraglossæ and the mentum tooth, shows that the species cannot properly be placed in that genus, although more closely resembling it to external view and in its compact robust form, than it does any other genus of the tribe. *Stilbolidus* is very distinct also in having no trace of the usual discal puncture of the elytra, the presence of this puncture being an exceedingly constant character in the Anisodactylini, as stated under *Anisodactylus*, and its absence in *lodingi* Schf., is an extraordinary exception to the general rule. There seem to be three species at hand as follows:

Body much stouter in build and larger in size, the elytral intervals feebly convex in both sexes, polished (♂) or strongly alutaceous (♀). Color deep black throughout, the tarsi piceous, the antennæ blackish throughout; lustre (♂) very highly polished and distinctly violaceous throughout above, or (♀) similar but scarcely at all violaceous and with the duller elytra deep black; head three-fifths as wide as the prothorax, with well developed prominent eyes and rather large, very deep foveæ, the surface impunctate, very smooth throughout (♂) or rugose anteriorly (♀); prothorax transverse, more than one-half wider than long, the sides moderately rounded, feebly converging and becoming just visibly sinuate basally, the angles slightly obtuse but very sharply marked and minutely subprominent; base transverse, slightly wider than the very feebly sinuate apex; surface very smooth and without any sort of sculpture throughout, finely reflexed but with a rather thick bead at the sides, the stria very fine and

feeble; foveæ small, subelongate, feebly impressed and smooth; elytra one-half longer than wide, not evidently wider than the prothorax (♂), or a little wider (♀), ogival behind, the oblique sinus long and very feeble, almost completely obsolete; striæ rather fine but sharply defined, the scutellar long; intervals 3–5–7 at apex each with two or three punctures as in *Triplectrus;* abdomen with fine sparse punctulation behind the coxæ; hind tarsi with the first three joints decreasing uniformly and rather rapidly in length, the first equal in length to the fifth. Length (♂♀) 13.0–14.0 mm.; width 5.0–5.5 mm. Mexico (Guadalajara)..... ***aztecanus** n. sp.

Body relatively much more slender and smaller in size.....2

2—Elytral sinus long and extremely feeble, almost obsolete, the surface never with more than an excessively feeble violaceous lustre, deep black, highly polished throughout (♂), the elytra (♀) with a very perceptible alutaceous lustre; head nearly as in the preceding but with longer neck, less developed eyes and smaller foveæ; prothorax much less transverse, two-fifths (♂) to three-sevenths (♀) wider than long, in outline, surface and angles nearly similar but with the foveæ less linear, broader, still feebler and more diffuse; elytra fully one-half longer than wide, distinctly (♂) to fully a fifth (♀) wider than the prothorax, the striæ fine; intervals almost perfectly flat throughout in both sexes, 5 and 7 with apical series of a few punctures; marginal line of foveæ similarly irregular and not medially interrupted; hind tarsi more elongate and much more slender than in *aztecanus.* Length (♂♀) 11.6 mm.; width 4.6 mm. Arizona (southern—Morrison; also in the Chiricahua Mts.). [*Anisodactylus arizonæ* Csy.]..... **arizonæ** Csy.

Elytral sinus not quite so long and less shallow, rather feeble but much more distinct than in either of the preceding; body nearly as in *arizonæ* but still more slender, with the very polished metallic lustre of the upper surface strongly violaceous, the elytra only just visibly less shining in the female than in the male; head and prothorax nearly as in *arizonæ,* the elytra also similar in general form and proportion but more gradually narrowed behind from nearer the middle, the apex more acutely ogival and the sinus deeper; striæ similarly fine but somewhat more impressed, the intervals feebly convex externally, gradually more convex suturally, in a manner observable to only a very feeble degree in *arizonæ;* hind tarsi nearly as in the latter, longer and more slender than in *aztecanus.* Length (♂♀) 11.3–11.8 mm.; width 4.3–4.5 mm. Mexico (Durango—near the city),—Wickham. Four examples. [*Harpalus mexicanus* Dej.]. ***mexicanus** Dej.

The species are very much alike in general features throughout, but closer observation reveals a number of structural differences relating to size, form, tarsal structure and modifications of the elytral sinus. It is probable that *Anisotarsus lamprotus* Bates, also belongs to this genus.

Anisotarsus Chd.

Eurytrichus Lec.

This is one of the most distinctly isolated genera of the tribe, not only in habitus, due to the elongate-oval outline, *Calathus*-like form and thinness of the integuments, but in the structure of the mouth-parts. The mentum is distinctly and angularly toothed, the ligula slender, scarcely enlarged at apex and usually very much shorter than the paraglossæ, the lobes of the latter long and evenly but not broadly rounded at tip. The second and third joints of the labial palpi are subequal in length. The terminal spur of the anterior tibiæ is slender and simple and the hind tarsi are slender, subglabrous above, with the basal joint about as long as the next two combined and longer than the fifth as a rule. The sterna and abdomen are almost completely impunctate. There is constantly a single discal elytral puncture, which is more posterior in position than usual, but there is no other distinct punctuation, excepting the uninterrupted marginal line of large and small foveæ. The species are decidedly numerous, those known at present from our fauna being as follows:

Body notably large in size. Color deep black throughout, without trace of metallic reflection, the tarsi piceous or paler; lateral edge of the pronotum slightly pale diaphanously; lustre shining, the elytra just visibly (♂) or strongly (♀) alutaceous; head three-fifths as wide as the prothorax, with rather large and prominent eyes, smooth, the foveæ minute and sublinear; palpi slender; antennæ slender, testaceous, the three basal joints partially blackish; prothorax two-fifths wider than long, the sides broadly and almost evenly rounded, a little less arcuate basally; apex moderately sinuate, much narrower than the base, which is transverse medially, broadly and feebly arcuate laterally, the angles obtuse, well defined and only finely blunt at their apices; surface subeven, impunctate throughout, the lateral gutter rather coarse, disappearing near basal third, the foveæ very shallow and somewhat vague, opaculate or rugulose but not punctate, the stria short, fine; elytra rather more than one-half longer than wide, fully a fourth wider than the prothorax, parallel, with rounded sides and, as usual, basally unexposed humeri, the apex gradually obtusely ogival, the sinus shallow but evident; striæ very fine, the scutellar long; intervals perfectly flat, the discal puncture behind apical fourth. Length (♂♀) 11.0–12.7 mm.; width 4.3–5.0 mm. Texas (El Paso) and Arizona. Abundant also throughout northern Mexico. The generic type of *Anisotarsus*.

brevicollis Chd.

Body much smaller, seldom at all over 10 mm. in length.....2

2—Elytra without pronounced greenish metallic lustre, even in the male. 3
Elytra with greenish metallic lustre, at least in the male. 8
3—Body uniformly piceous or black in color when mature. 4
Body pale testaceous, the elytra piceous-brown. 7
4—Species of the Atlantic and Gulf regions. 5
Species of the Sonoran regions. 6
5—Form rather stout, oblong-suboval, only moderately convex, piceous-black, the legs more or less pale rufous; lustre very strongly shining, the elytra not evidently alutaceous even in the female, though the micro-reticulation is feebly evident in both sexes; basal and lateral parts of the pronotum diaphanously paler; head about half as wide as the prothorax, with notably prominent eyes, the antennæ slender pale testaceous, the foveæ very small; prothorax transverse, three-fifths wider than long, the sides broadly and almost evenly arcuate, gradually converging anteriorly from behind the middle; apex very feebly sinuate, three-fourths as wide as the base, which is transverse throughout, with the angles slightly obtuse, having the tips narrowly blunt; surface very smooth, impunctate, narrowly deplanate at the sides, rapidly more widely posteriorly, curving inward and disappearing near basal third, the foveæ elongate, broadly sublinear and feebly impressed, sometimes with excessively minute and sparse surrounding punctulation; elytra one-half longer than wide, just visibly wider than the prothorax, feebly arcuate at the sides, gradually sharply ogival behind, the sinus very oblique, long and extremely feeble; striæ fine, the intervals nearly flat, the discal puncture near posterior fifth; basal joint of the hind tarsi unusually short, not as long as the next two combined and about as long as the fifth. Length (♂♀) 9.5–10.8 mm.; width 3.8–4.2 mm. District of Columbia. [*Anisodactylus sayi* Blatch.]. . . . . **piceus** Lec.
Form much more abbreviated, rather more convex and smaller in size, deeper black, piceous beneath, the entire legs and slender antennæ pale testaceous; sides of the pronotum only feebly diaphanous at the edges; lustre shining, the elytra (♀) scarcely at all duller; head barely more than half as wide as the prothorax, with moderate but prominent eyes and extremely minute punctiform foveæ, lying within feeble vague impressions; prothorax one-half wider than long, the sides subevenly and rather strongly arcuate; apex feebly sinuate, with broadly rounded angles and much narrower than the base, which is transverse, with the angles rather broadly obtuse but only blunt at the tips; surface throughout nearly as in *piceus*, except that the foveæ are broader, still more feeble and very vague, the stria excessively fine, incomplete; elytra unusually short, only about two-fifths longer than wide, oblong, with rather strongly arcuate sides and rapidly obtusely ogival apex, fully a fifth wider than the prothorax, the sinus feeble but distinct; striæ fine, somewhat impressed, the intervals feebly convex in both sexes, the puncture at apical fifth; hind tarsi very slender, the basal joint as long as the next two and slightly longer than the fifth. Length (♂♀) 8.8–9.0 mm.; width 3.7–3.8 mm. Texas (Galveston). Five examples.
convexulus n. sp.

Form broader, more oblong, not quite so convex, deep black, the fine reflexed thoracic margins slightly pallid; under surface piceous; legs and rather long slender antennæ pale testaceous; lustre shining, the elytra (♀) just visibly alutaceous and sometimes with a very feeble violet-blue tinge, never observable in the preceding; head slightly larger, with somewhat larger and notably more prominent eyes, the foveæ very small and feeble; prothorax nearly as in the preceding but slightly more transverse and with still more blunt and perceptibly rounded basal angles; foveæ extremely faint and vague, not in the least lineiform; elytra rather short, less rounded at the sides than in *convexulus*, obtusely ogival at apex, with rather strong sinus, a fifth wider than the prothorax; striæ very fine, much finer than in the preceding, with the intervals perfectly flat, though becoming very faintly convex suturally. Length (♂ ♀) 9.0–9.3 mm.; width 3.8–4.0 mm. Texas (Galveston and westward nearly to El Paso). Five examples. Probably allied closely to *purpurascens* Bates.

inaudax n. sp.

Form only moderately elongate and convex, the size still much smaller, black or slightly piceous, the fine peripheral bead of the pronotum diaphanously pale; under surface piceous; legs testaceous, the femora somewhat paler than the tibiæ and tarsi; antennæ and palpi slender and pale testaceous; lustre strongly shining throughout in both sexes; head moderate, rather elongate, the eyes moderate in size and prominence; foveæ excessively minute, almost obsolete; epistoma with a single angular puncture as usual; prothorax one-half wider than long, the sides unusually parallel, evenly and rather strongly arcuate; apex very moderately sinuate, evidently narrower than the base, which is transverse, with the angles obtuse and narrowly rounded; surface nearly as in the preceding, except that the marginal line is very narrow, extremely feebly defined, not deplanate and disappears somewhat behind the middle; median stria very much stronger than in any of the preceding, extending from base to apical third, where it meets the very feeble angulate transverse impression; foveæ rather finely sublinear but so feeble as to be barely traceable; elytra nearly as in *convexulus*, about a fifth wider than the prothorax, with distinct sinus and fine striæ; intervals similar in the sexes, flat, becoming faintly convex suturad, slightly convex on the declivity, there much more narrowed and more convex than in any of the preceding; hind tarsi very slender, the basal joint much longer than the fifth. Length (♂ ♀) 7.4–7.7 mm.; width 3.0–3.2 mm. Missouri (St Louis) and Texas. Apparently not common. [*Harpalus agilis* Dej.]..... **agilis** Dej.

6—Body oblong-suboval, moderately convex, nearly as in *inaudax* but more elongate, more obtuse at apex and with shorter and deeper sinus, piceous-black, the elytra deeper blue-black, the sides of the pronotum diaphanously paler; slender antennæ and legs testaceous; head as in *inaudax* but with deeper foveæ, lying within deeper impressions, the eyes similarly well developed and prominent; prothorax similar, except that the basal foveæ are long and finely linear though feeble, not broadly and vaguely impressed; elytra longer,

rather more than one-half longer than wide, only a little wider than the prothorax, parallel, with broadly arcuate sides and obtusely ogival apex, the sinus rather short and very distinct; striæ very fine, the scutellar long, the intervals perfectly flat, becoming feebly convex suturad, rather strongly sericeo-alutaceous in the female, the discal puncture at apical fourth. Length (♀) 9.8 mm.; width 3.8 mm. California (Los Angeles Co.).....**extraneus** n. sp.

Body narrower and more oval than in *extraneus*, very moderately convex, shining, the elytra (♀) very feebly alutaceous; color piceous-brown, the elytra but little darker than the anterior parts; under surface more rufous; slender antennæ and the legs pale testaceous; head three-fifths as wide as the prothorax, with rather constricted neck, prominent eyes and minute feeble foveæ, also usually having a minute punctiform impression at the centre of the vertex; prothorax one-half wider than long, truncate at base, sinuato-truncate and slightly narrowed at apex, the sides rounded, somewhat straighter basally, the basal angles obtuse, with their apices blunt; surface impunctate, feebly subdepressed latero-basally and with feeble reflexed edges, broadening and disappearing gradually behind the middle, nowhere at all abruptly defined, the foveæ short, sublinear but very broadly and feebly impressed, the median stria short and feeble; elytra one-half longer than wide, with distinctly arcuate sides and obtusely ogival apex, almost a third wider than the prothorax, the sinus very distinct; striæ very fine, the intervals flat, sometimes feebly convex suturad; hind tarsi slender, the basal joint not as long as the next two and equal to the fifth. Length (♂♀) 8.8–9.4 mm.; width 3.6–3.7 mm. Arizona (probably southern).....**calathoides** n. sp.

7—Form somewhat as in the preceding but narrower and still more *Calathus*-like, pale testaceous in color throughout, the elytra rather pale piceous-brown; surface shining throughout (♂), the elytra feebly opaculate (♀); head nearly as in the preceding but somewhat smaller, the antennæ still longer and more slender; foveæ very minute, scarcely visible; prothorax two-fifths (♂) to slightly more (♀) wider than long, the apex sinuato-truncate and much narrower than the base, the sides rather strongly, subevenly rounded throughout, the margin narrowly deplanate anteriorly, gradually becoming rather broadly so basally and somewhat abruptly defined throughout, the foveæ extremely feebly impressed, not linear, the stria short, medial and feeble; elytra more than one-half longer than wide, nearly a fourth wider than the prothorax, the sides broadly arcuate; sinus very shallow and obsolescent; striæ very fine but distinct, the intervals flat (♀) or feebly convex (♂); hind tarsi very slender, the first three joints decreasing uniformly and rapidly in length, the first somewhat longer than the fifth. Length (♂♀) 8.0–9.3 mm.; width 3.2–3.5 mm. Indiana and Wisconsin. [*Harpalus testaceus* Hald.].....**testaceus** Hald.

8—Head small, never more than slightly exceeding half the width of the prothorax.....9

Head notably large, about three-fourths as wide as the prothorax....12

9—Sides of the prothorax more or less distinctly deplanate.....10

Sides not at all deplanate; body very small in size.....11

10—Form oblong-oval, moderately convex, piceous above and beneath, the legs and the slender antennæ testaceous; elytra black, with greenish lustre, strongly shining (♂) or alutaceous (♀); head with well developed prominent eyes and fine foveæ, the antennæ not quite half as long as the body; prothorax about one-half wider than long, the sides nearly parallel and feebly arcuate to beyond the middle, then rounding to the apex, which is sinuato-truncate and much narrower than the transverse base, the basal angles nearly right but distinctly though narrowly rounded; surface wholly devoid of sculpture, rather coarsely concavo-explanate at the sides, rapidly more broadly and flatly posteriorly, curving inward nearly to the feeble and very vague foveæ, diaphanously pale throughout; anterior angulate transverse impression rather distinct, the stria thence nearly to the base very fine; elytra more than one-half longer than wide and three times as long as the prothorax, a third wider than the latter, obtusely ogival at apex, the sides arcuate; sinus feeble but evident; striæ fine but distinct, the scutellar long; intervals nearly flat, feebly convex suturad, the discal puncture near apical fourth to fifth; basal joint of the hind tarsi as long as the next two and longer than the fifth. Length (♂♀) 7.8–9.0 mm.; width 2.9–3.8 mm. New York to North Carolina and westward to Iowa and Missouri. Very abundant.....**terminatus** Say

Form more elongate, larger in size, black, with diaphanous thoracic edges, the elytra rather more obscure greenish-metallic, the lustre in both sexes as in the preceding; under surface piceous-black, the legs and antennæ bright testaceous; head nearly as in *terminatus*, the antennæ relatively not so long though rather slender, the median line of the flattened sides of the joints blackish; prothorax one-half wider than long to a little less (♂), the sides moderately arcuate and subevenly so from base to apex, the latter distinctly sinuate and three-fourths as wide as the base, the basal angles but little more than right, narrowly though distinctly rounded; surface impunctate but somewhat alutaceous basally, the deplanate margin much less abruptly defined than in *terminatus*, narrower and becoming extinct near basal third, the foveæ rather large but extremely feeble and vague; stria excessively fine; elytra three-fifths longer than wide and more than three times as long as the prothorax, fully a fourth wider than the latter, parallel, with distinctly arcuate sides, the apex, striæ and intervals somewhat as in *terminatus*, the puncture about at apical fifth; hind tarsi nearly similar. Length (♂♀) 8.8–10.0 mm.; width 3.5–4.0 mm. Texas (Austin). Twelve examples, taken by the writer.
subvirens n. sp.

Form more oblong, much smaller in size, moderately convex, black, the thoracic bead diaphanous; elytra (♂) shining and with distinct metallic green lustre; under surface piceous-black, the legs pale testaceous, the antennæ as in the preceding; head with moderately large and prominent eyes and very small indistinct foveæ; prothorax fully one-half wider than long, the sides broadly rounded, rather more so and converging apically, the apex distinctly sinuate, much

narrower than the base, the basal angles evidently more than right, with their tips finely blunt; surface smooth and impunctate, finely subdeplanate laterad anteriorly, gradually somewhat more broadly posteriorly, the slope disappearing, curving inward, near basal third, everywhere feebly defined and not flat, the region near the angles rather flattened as usual; foveæ large, somewhat elongate, more deeply impressed than usual though not well defined, the stria almost obsolete; elytra one-half longer than wide, gradually arcuately narrowing and ogival behind about the middle, only about a sixth wider than the prothorax, with feebly arcuate sides, the sinus feeble though distinct; striæ fine, the intervals feebly convex, notably so suturad, the puncture near apical fifth; hind tarsi with the first joint longer than the fifth. Length (♂) 7.8–8.0 mm.; width 3.2 mm. Florida. . . . . **floridanus** n. sp.

11—Body narrowly oblong-oval, moderately convex, black, shining, the thoracic bead diaphanous; elytra somewhat obscure metallic-green (♂), not distinctly so (♀); under surface black, the legs pale testaceous; head with very moderate and not very prominent eyes, the foveæ almost completely obsolete; antennæ slender and testaceous, moderate in length; prothorax not quite one-half wider than long, the sides broadly rounded, a little less so posteriorly; apex distinctly sinuate, evidently narrower than the base, which is transverse, with the angles somewhat obtuse and with their tips narrowly rounded; surface almost evenly and rather feebly convex from one finely reflexed lateral edge to the other, impunctate, the foveæ small but sublinear, very feeble though evident; stria very fine from the subobsolete angulate anterior impression to the base; elytra not quite one-half longer than wide, less than a fourth wider than the prothorax, parallel, with broadly arcuate sides and rapidly obtusely ogival apex, the sinus broad and feeble though very distinct; striæ very fine but distinct, the scutellar oblique and very moderate in length; intervals flat externally, feebly convex and with deeper striæ suturad, the puncture near apical fourth; tibiæ and hind tarsi unusually slender, the latter rather short, the basal joint distinctly shorter than the next two and equal to the fifth; claws slender, not very arcuate. Length (♂ ♀) 6.0–7.7 mm.; width 2.25–2.95 mm. North Carolina (Asheville). Six examples, taken by the writer.

delicatus n. sp.

12—Form elongate-suboval, moderately convex, very shining, black, the thoracic edge and elytral suture paler, the lustre bright greenish-metallic, a little brighter on the elytra, the under surface blackish-piceous; legs and moderately slender antennæ testaceous; head smooth, the foveæ excessively minute, lineiform, the eyes very moderate in size and prominence; prothorax fully one-half wider than long, the sides rounded anteriorly, slightly oblique and nearly straight in about basal half; apex evidently sinuate and but little narrower than the base, which is transverse, minutely beaded as usual, the angles notably obtuse but very distinct, their apices only finely blunt; surface subevenly and very feebly convex from side to side and everywhere with excessively minute sparse punctulation,

observable only with difficulty, without a marginal gutter, the edge very finely and evenly reflexed throughout the length; foveæ obsolete; anterior transverse impression evident but feeble; stria fine but distinct, subentire; elytra less than one-half longer than wide, at the middle a fifth wider than the prothorax, the sides evenly, distinctly arcuate; apex rapidly obtusely ogival, the sinus feeble though evident; striæ very fine though distinct, rapidly coarser at apex, the scutellar rather long but oblique; intervals (♀) flat, shining, though with visible micro-reticulation and with excessively minute sparse punctulation throughout; foveæ of the lateral line coarse, interrupted for a short distance medially; discal puncture behind apical fifth; hind tarsi rather slender, the basal joint fully as long as the next two, the second very nearly as long as the fifth, which is unusually short; claws very small. Length (♀) 8.0 mm.; width 3.0 mm. Florida (without further indication).....**cephalus** n. sp.

Form subsimilar, even less convex and more parallel, piceous, with strong metallic-green lustre above, pale brown beneath, the legs and antennæ still paler testaceous; integuments very strongly shining throughout in both sexes; head nearly as in the preceding but relatively broader, the antennæ similar, extending slightly behind the thoracic base, the foveæ obsolete; prothorax even shorter and more transverse, the sides more evenly rounded, becoming only a little less arcuate and nearer the base, the basal angles rather less obtuse but with their apices blunter or narrowly rounded; apex similarly sinuate and subequal to the base; surface nearly similar but even more depressed, the transverse impression less visible, the extremely minute sparse punctulation barely discoverable; foveæ similarly almost completely obsolete; elytra slightly more elongate, more rapidly and broadly obtuse at apex, parallel, with more feebly arcuate sides and relatively narrower, barely visibly wider than the prothorax, the sinus similar; surface similar, except that the striæ are extremely fine, much finer even than in *cephalus* and relatively coarser on the declivity; intervals perfectly flat, the minute punctulation just visible (♂), almost obsolete (♀), the discal puncture at apical fifth in the former sex, at apical sixth in the latter; hind tarsi similarly rather short and even somewhat more slender, the first joint as long as the next two, the second not as long as the fifth. Length (♂♀) 7.3–8.0 mm.; width 2.8–2.9 mm. Florida (Lake Worth),—Kinzel.....**tenuitarsis** n. sp.

Testaceus Hald., seems to be specifically different from *terminatus* and I have therefore reinstated it; the very pale coloration is apparently constant and is not accompanied by the desiccatory distortion usual in cases of immaturity, although the integuments are very thin even for the present genus. There are several species that I am unable to recognize among my material; these are as follows, with characters drawn from available descriptions:

A. maculicornis Chd. (*Harpalus*).—Oblong, black, shining; prothorax one-half wider than long, slightly narrowed anteriorly, the sides

moderately rounded, broadly subdepressed posteriorly, the hind angles obtuse; base feebly impressed at each side; elytra striate, the intervals barely convex, the third unipunctate posteriorly; antennæ and palpi rufous, the former with joints 2–6 more or less nigrescent. Length 14.5 mm. Louisiana.

The characters are taken from LeConte's description (Tr. Am. Phil. Soc., 1853, p. 384); the only one mentioned which is of any great comparative value is the size of the body, and this indicates that the species should be placed next to *brevicollis* Chd., in the above table.

A. nitidipennis Lec.—Oblong, rather narrower than *agilis*, shining, obscure viridi-æneous, the head and prothorax more obscure; head two-thirds as wide as the prothorax, smooth, the frontal impressions punctiform; antennæ with the three basal joints rufo-testaceous, the remainder maculate with brown; prothorax somewhat narrowed behind, fully one-half wider than long, quadrate, truncate at apex and base, the sides rounded; hind angles obtuse, not rounded, scarcely explanate; surface somewhat convex, the margin depressed; anterior transverse impression deep, angulate, the stria fine, biabbreviated, the foveæ linear: elytra parallel, the apices only slightly sinuate, striate, the intervals accurately flat, the third unipunctate, the marginal series of foveæ interrupted medially; under surface black, the legs and trochanters rufous. Length 7.5 mm.; width 2.8 mm. Georgia. A single specimen.

There can be but little doubt that this species belongs near *cephalus* and *tenuitarsis*, which together form a very isolated section of the genus, but in neither of them could the anterior margin of the prothorax be described as truncate; the sinus is distinct and well developed, though only moderately deep. The coloration of the antennæ, also, seems to be different; the joints beyond the third in *cephalus* and *tenuitarsis*, have a faint blackish slender line along the middle of the flattened sides, as is often the case in other unrelated forms, but this would hardly suit the language of the description. LeConte states that *nitidipennis* is related to *agilis*, which is clearly not the case with the two species mentioned.

A. flebilis Lec. (*Eurytrichus*).—Oblong, piceous-black, somewhat shining; prothorax more than one-half wider than long, equally narrowed anteriorly and posteriorly, the sides rounded, oblique posteriorly, the hind angles obtuse, not at all rounded; surface feebly impressed at each side of the base; elytra slightly wider than the prothorax, finely striate, the second stria unipunctate posteriorly; antennæ, palpi and legs piceo-rufous. Length 8.8–10 mm. Lower California (Cape San Lucas). Quite distinct from our other species by the form of the prothorax; the sides behind are scarcely perceptibly flattened.

Probably related to *calathoides*, but the thoracic apex is much narrower than the base in that species and not subequal in width as might be inferred from the description of *flebilis;* this, when considered in connection with the facts that the tip of Lower California is in a somewhat different zoological region from Arizona and the rest of the California Peninsula and that the species are somewhat numerous in the Sonoran regions, renders actual specific identity in this case highly improbable.

Spongopus Lec.

This genus is also one of the more distinctly characterized members of the Anisodactylini, having a facies entirely its own, due to the short cordiform prothorax and large and very elongate elytra, when compared with the anterior parts. It is allied closely to *Anisotarsus*, but differs in the dense hard integuments among other features. The mentum tooth is only moderate in size as in *Anisotarsus*, but is triangular, clearly defined and constant. The ligula is rather slender and is gradually and only very slightly broader apically; the paraglossæ are an extreme development of forms frequently observed in the tribe, the outer part of the apex being greatly prolonged into a slender process, extending far beyond the tip of the ligula and with its apex somewhat curving inward. The labial palpi are long and slender, the third joint but little shorter than the second, which has many long bristling setæ along its anterior side as usual in the tribe. The terminal spur of the anterior tibiæ is long and very slender, but nevertheless has the posterior side arcuate basally, while the anterior side is almost perfectly straight. The hind tarsi are long, with some irregular punctures and short hairs dorsally, the first joint about as long as the next two and equal to the fifth, the claws strongly arcuate and well developed. The elytra have a fine suffused punctulation, but the abdomen is smooth, excepting the usual fine post-coxal punctures. The type species may be known by the following characters:

Body above and beneath rather deep black, strongly shining throughout above in both sexes, there being absolutely no apparent sexual difference of any kind; legs and antennæ rufo-testaceous; head evidently more than half as wide as the prothorax, almost smooth, with very prominent eyes and unusually large deep irregular foveæ, which have a ramus curving outwardly, generally almost to the eyes; antennæ long, rather slender; transverse red spot of the vertex

conspicuous; prothorax fully one-half wider than long, strongly rounded at the sides anteriorly, the sides gradually oblique and straight posteriorly to the obtuse angles, which are sharply defined and often minutely prominent; apex broadly and moderately sinuate and subequal to the very feebly arcuate base, which is finely and strongly, evenly beaded; surface moderately convex, smooth, with vestiges of minute sparse punctulation throughout, rather broadly reflexed and rugosely punctate at the sides, the gutter even in width from apex to basal third where it disappears in the large concavo-explanate latero-basal parts, which merge gradually into the large and rather deep, rounded and coarsely, densely punctured foveæ; the median parts of the base are also depressed and distinctly punctured; anterior impression distinct, rather closer to the apex than in *Anisotarsus;* stria distinct and subentire; elytra oblong, parallel, with feebly arcuate sides, rather more than one-half longer than wide and a third wider than the prothorax, obtuse at apex, the sinus long and distinct; striæ strong and impressed, the scutellar very long; intervals rather strongly convex throughout, the discal puncture coarse and at three-fifths; suffused punctures dense near the sides, where they bear minute hairs. Length (♂♀) 12.8–13.5 mm.; width 4.8–5.0 mm. North Carolina (Asheville), Iowa and Kansas.

verticalis Lec.

The genus *Spongopus* was considered as scarcely distinct from *Anisotarsus* by Lacordaire, but it has an altogether different habitus, as may be inferred from the description, and is without much doubt a distinct genus.

The Central American *Notiobia leiroides* and *parilis* of Bates, of which I have specimens from Honduras, almost exactly resemble *Spongopus verticalis* in outline, facies and in the dense integuments, but the eyes are larger and more conspicuous; the transverse cordiform prothorax is similar in the sharply marked hind angles, but is without lateral or basal punctuation; the elytra are devoid of all trace of diffused punctuation and the paraglossæ are entirely different in form, being broadly truncate at apex and not in the least prolonged at the external apical angle. The mentum tooth is well developed, much as in *Spongopus.* In a natural arrangement *Notiobia* Perty, would therefore come between *Anisotarsus* and *Spongopus.* The elytral striæ in *parilis* are sulciform and are especially deep along the summit of the lateral declivity.

Tribe ACUPALPINI.

The chief distinguishing characters of this tribe are the bisetose second labio-palpal joint and the form of the frontal foveæ; it

should be added also that the body is always small or very small in size. The genera are numerous, perhaps more so when compared with the known species than in most of the other tribes, indicating an unusual amount of structural diversification; for example, nearly all the male tarsal modifications of all the preceding tribes occur here, from the solidly pubescent *Anisodactylus*-like soles of *Pelmatellus*, through the biserially squamulose *Harpalus*-like developments seen in the Bradycellids and in *Stenolophus*, to the sexually unmodified tarsi of *Agonoderus*, representing the Daptid type, and, as in *Geopinus* of the Daptini, the hind tarsi in *Agonoderus* are of a somewhat tapering form. There is comparatively little variety, so far as observed, in the ligula and paraglossæ, but the presence or absence of a mentum tooth is taxonomically much more important here than in the Harpalini and even somewhat more so than in the Anisodactylini. The last joint of all the palpi is frequently more subulate at apex than in the preceding tribes and the third joint of the labial palpi is nearly always much longer than the second. The essential differential characters distinguishing the genera represented in the material at hand may be expressed briefly as follows:

Mentum toothed, the anterior, at least, of the male tarsi moderately dilated and squamulose beneath; hind tarsi always slender and filiform 2

Mentum not toothed; antennæ with but two glabrous basal joints, as usual in the subfamily 13

2—Hind angles of the prothorax with a long erect seta as in *Diachromus* of the preceding tribe 3

Hind angles without an erect seta 4

3—Palpi long and slender, the second joint of the labial as long as the third and with about three long setæ; anterior tarsi (♂) broadly dilated, the joints 2–4 transverse, clothed beneath with a loose but rather uniform mixture of long hairs and hair-like squamæ, the middle tarsi slender, barely at all dilated and with a few squamæ; upper surface with uniform strong micro-pubiferous punctulation throughout, the third and fifth strial intervals with widely spaced series of slightly coarser punctures. Palæarctic regions.

***Dicheirotrichus**

Palpi all short and relatively stout, the second joint of the labial bisetose, as usual in the tribe, and a little shorter than the third; anterior tarsi (♂) feebly dilated, rather flattened, the joints subquadrate, clothed uniformly and closely beneath joints 1–4 with slender subdecumbent squamules, which extend transversely from the median line, the middle tarsi slender and unmodified; upper surface with

minute pubiferous punctulation marginally and sometimes throughout the elytra, the latter with the usual single discal puncture and without scutellar stria; body much smaller in size, inflated posteriorly and with rather thin integuments. Nearctic and Palæarctic regions. **Trichocellus**

4—Elytra without continuous striæ, except the sutural, and without the usual discal puncture; anterior tarsi (♂) feebly dilated and indistinctly squamulose beneath, the middle tarsi slender and unmodified; integuments thick. Pacific regions..... **Glycerius**

Elytra each with nine uninterrupted and equal striæ.....5

5—Anterior and middle tarsi (♂) rather strongly and subequally dilated, the soles densely and uniformly clothed with subequal squamules nearly as in the Anisodactylini; second and third labio-palpal joints subequal, rather elongate; pronotum feebly beaded at base. Sonoran and Mexican faunas..... **Pelmatellus**

Anterior and middle tarsi (♂) dilated though unequally, both distinctly biserially squamose beneath as in Harpalini; labial palpi still longer, with the second and third joints subequal; frontal foveæ not much prolonged; pronotum strongly beaded at base. Atlantic regions of North America..... **Episcopellus**

Anterior and middle tarsi (♂) dilated and strongly, biseriately squamose beneath as in *Episcopellus;* labial palpi with the second joint much shorter than the third; frontal foveæ small, punctiform as in *Harpalus,* not obliquely prolonged; pronotum finely beaded at base, the bead subentire; hind tarsi long and slender. South Africa. ***Bradycidus**

Anterior tarsi (♂) feebly dilated or swollen, feebly, biseriately squamulose beneath, the middle tarsi slender and scarcely at all dilated though feebly biseriately squamulose as a rule.....6

6—Antennæ with three basal joints glabrous, though sparsely setulose..7

Antennæ with two or three glabrous joints; body much more slender in form and of smaller size, the scutellar stria wholly wanting as a rule.9

7—Frontal foveæ isolated, not obliquely prolonged toward the eyes. Northwestern North America..... **Tachycellus**

Frontal foveæ linear and oblique as usual in the tribe and virtually attaining the eyes; pronotum not basally beaded, except at the sides. 8

8—Hind tarsi long. Nearctic regions..... **Triliarthrus**

Hind tarsi short though slender. Palæarctic regions..... ***Bradycellus**

9—Pronotum not foveate or punctate basally and without trace of the usual basal fovea of the elytra and, consequently, never with a scutellar stria; antennæ rather stout, with only two glabrous joints. Atlantic regions..... **Catharellus**

Pronotum more or less foveate and punctate at base, the basal fovea of the elytra near the scutellum always distinct.....10

10—Eyes well developed as usual, the mandibles short; antennæ with three glabrous or subglabrous joints, the third however with numerous setæ.....11

Eyes small, the mandibles long and very prominent.....12

11—Second labio-palpal joint short, broad, flattened and subtriangular,

shorter than the third; prothorax with obtuse or rounded basal angles. Nearctic regions.....**Stenocellus**

Second labio-palpal joint narrower, more elongate and not flattened, slightly shorter than the third; prothorax sinuously narrowed posteriorly, the basal angles sharply defined and right. Central and South American faunal regions.....***Goniocellus**

12—Second labio-palpal joint still longer, slender, about as long as the third; mentum tooth still longer, very acute, as long as the lateral lobes, the emargination of the mentum rather shallow; antennæ with only two glabrous joints, the third similar to the fourth in outline and vestiture; prothorax sinuously narrowed basally, with sharp angles. Atlantic faunal region.....**Amerinus**

13—Elytra each with three series of substrial punctures as in the Selenophorini; body very small, narrow and depressed, the prothorax sinuously narrowed basally, with sharp angles as in the two preceding genera. Atlantic regions.....**Philodes**

Elytra each with a single series of substrial punctures, three to five in number and adjacent to the second stria; body very small but not so depressed as in *Philodes*, the prothorax sinuously narrowed basally as in the three preceding genera. Atlantic regions...**Goniolophus**

Elytra without series of substrial punctures but always, so far as known, with a single discal puncture behind the middle of the elytra, as in Harpalini and Anisodactylini.....14

14—Anterior, and frequently both anterior and middle, tarsi (♂) more or less dilated and biseriately squamulose beneath; hind tarsi always slender and filiform.....15

Anterior and middle tarsi not or but very slightly modified sexually; body convex, oblong-oval.....19

15—Prothorax as in the four preceding genera, sinuously narrowed basally, with sharply defined and prominent angles; basal foveæ deeply excavated as in *Amerinus;* body rather depressed. Palæarctic and Nearctic (west coast).....**Anthracus**

Prothorax nearly as in *Agonoderus*, with obtuse and generally rounded basal angles.....16

16—Fourth joint of the anterior tarsi (♂) emarginate, the middle tarsi slender, filiform and similar in the sexes; body very small in size, the head often greatly developed.....17

Fourth joint (♂) strongly bilobed, the lobes separated by a very deep sinus.....18

17—Elytra with distinct striæ, the prothorax with rather definite though obtuse basal angles. Nearctic and Palæarctic faunas...**Acupalpus**

Elytra with vestigial striæ and more truncate than usual at apex; prothorax with broadly rounded angles; head very large in typical forms. South African regions near the Cape.....***Agonidus**

18—Anterior and generally the intermediate tarsi (♂) sensibly dilated and biseriately squamulose beneath, the character somewhat inconstant in regard to the middle tarsus, which is often undilated in the male; hind angles of the prothorax always well rounded; hind tarsi rather long and slender. Nearctic and Palæarctic faunas.
Stenolophus

Anterior and middle tarsi (♂) not known, the types being female, but the general habitus indicates this as the proper place in the series; body slender, much depressed, the prothorax as in *Agonoderus*, the head smaller, the antennæ very long and slender; hind tarsi very slender and filiform but shorter than in *Stenolophus*. Rocky Mountain region..... **Agonoleptus**

19—Hind tarsi short but filiform; body very small in size, the scutellar stria very short to obsolete. Atlantic regions..... **Tachistodes**

Hind tarsi more or less stout basally, gradually tapering thence to the tip as in *Geopinus* and *Anadaptus;* body not so small, still more convex than in *Stenolophus*. Nearctic regions..... **Agonoderus**

Remarks on the exotic genera introduced above may be made as follows:

DICHEIROTRICHUS Duval.—This is one of the most remarkably isolated, yet synthetic genera of the entire subfamily and consists of five or six species, confined to the European faunal regions. It is somewhat intermediary between the divisions of the subfamily based upon the structure of the labial palpi, and the male tarsal soles are clothed in a peculiar manner, not exactly as in Anisodactylini and widely different from the form developed in *Trichocellus* and *Stenolophus*. In general appearance the genus undoubtedly harmonizes better with *Trichocellus*, and hence with the other Acupalpids, than it does with any of the Anisodactylini. On account of the possession, in common with *Diachromus* and *Trichocellus*, of a long erect seta at the hind angles of the prothorax, a character unknown elsewhere in the subfamily, it might perhaps be more logical to assign these three genera to a special tribe.

BRADYCIDUS n. gen.—This genus is rather closely allied to *Bradycellus*, but differs in many features structural as well as habital; the body is more oblong and less ventricose, the emargination of the mentum deeper and the tooth small and broadly rounded, this being a modification in the direction of *Stenolophus*, and the anterior and middle tarsi of the male are almost exactly as in that genus and *Episcopellus*, both being moderately dilated and with two series of elongate scale-like plates beneath. The palpi are slender, the third joint of the labial very gradually and gently narrowed from near the base to the apex, narrowly truncate, the fourth joint of the maxillary not quite twice as long as the third. The frontal foveæ are minute, punctiform and not at all obliquely prolonged, this formation being an exception in the

Acupalpini and of a common Harpalid type; the third antennal joint is nearly like the fourth in form, color and vestiture; the hind tarsi are long and slender and the prosternal process has at tip two strong setæ. The single species is the following:

*B. veneris n. sp.—Oblong-suboval, rather convex, shining, deep black, the elytra with feeble greenish lustre, the suture and thoracic edges feebly pallescent; under surface black, the legs rather pale piceous; palpi blackish-piceous, pale at apex; head moderate, three-fifths as wide as the prothorax, rather constricted behind the moderate but rather prominent eyes; antennæ very slender and filiform, longer than the head and prothorax, dusky, the two basal joints paler; prothorax not quite one-half wider than long, widest very slightly before the middle, the sides broadly, subevenly rounded, nearly straight basally; apex sinuato-truncate, with narrowly rounded angles, narrower than the base, which is transverse, straight and minutely beaded, the angles slightly more than right and only very finely blunt at their tips; surface smooth and subeven, with fine subentire stria and fine even reflexed sides, the foveæ sublinear though feeble, somewhat opaculate or subrugulose but not evidently punctate; elytra nearly one-half longer than wide and a fourth wider than the prothorax, parallel, with broadly arcuate sides and rounded apex, the sinus wide and feeble though evident; striæ fine but rather deep, the scutellar moderately long, subparallel, with the fovea strong; intervals flat or very nearly, the discal puncture behind apical third; lateral line of foveæ clearly interrupted medially; abdomen smooth; hind tarsi very slender, but slightly shorter than the tibiæ, the first three joints uniformly and gradually decreasing in length, the first fully as long as the fifth, the claws very slender and delicate. Length (♂) 5.0 mm.; width 2.0 mm. Cape of Good Hope (Wellington).

Were it not for the bisetose second labio-palpal joint, this species could very well be regarded as a minute *Harpalus*. The single example was taken by the writer while a member of the Transit of Venus expedition of 1882, under Prof. Simon Newcomb.

BRADYCELLUS Erichs.—The species assumed as typifying this genus in the above table is the *collaris* of Paykull. The body is more ventricose than in any of the American allied forms, but the first three antennal joints are similarly glabrous; the mentum tooth is well developed, triangular and very acute at tip, the mental emargination very shallow; the second labio-palpal joint is elongate-oval, not compressed and much shorter than the third, which rapidly becomes finely subulate at tip; the last joint of the outer maxillary lobe has a peculiarly inflated, apically subulate form, somewhat like that of the third labio-palpal joint but more slender; the last joint of the maxillary palpi is twice as long as the

preceding joint and is much more gradually pointed than that of the labial palpi. The single discal puncture of the elytra is extremely minute, the lateral line of foveæ broadly interrupted medially, the striæ deep and abrupt and the scutellar stria short but distinct, extending from an unusually strong deep annulate fovea. The antennæ and hind tarsi are distinctly short when compared with most of the American types, and I have at present scarcely any doubt of the generic distinctness of all the latter as defined in the table.

GONIOCELLUS n. gen.—The body here is somewhat ventricose as in *Bradycellus*, but the hind body is oblong and parallel and not so oblong-oval and with rather strongly arcuate sides as it is in that genus, and the prothorax is of an entirely different shape, being sinuously narrowed basally, with right and very sharply defined basal angles. The mental emargination is similarly very shallow and the tooth large and very acutely triangular. The palpi and maxillary lobe are also nearly as in *Bradycellus*, except that the last joint of the palpi is very much more gradually pointed and the outer lobe of the maxilla less inflated basally, longer and much more gradually drawn out into a fine point apically. The antennæ are more slender and have but two glabrous joints, the third being nearly like the fourth, though notably more elongate. The elytral striæ are deeply impressed, sulciform, the scutellar wholly wanting, although the fovea is well developed; the discal puncture is strong and the lateral line of foveæ very widely interrupted. The hind tarsi are very slender and more or less notably long. There are two species before me, which may be described as follows, *bifossifrons* being the type:

***G. bifossifrons** n. sp.—Convex, strongly shining, blackish-piceous, the thoracic margins somewhat paler, the head also not so dark as the elytra; legs honey-yellow; head three-fourths as wide as the prothorax, with well developed and prominent eyes, the frontal foveæ very deep, oblique and attaining the eyes; antennæ long and slender, rather more than half as long as the body, brown, the basal joint honey-yellow; prothorax not a third wider than long, the sides rounded anteriorly, oblique and broadly sinuate basally, the angles right and extremely sharp but not everted; base and apex equal, the latter broadly sinuato-truncate, with sharply marked but not prominent angles; surface smooth, finely reflexed along the sides, feebly impressed latero-basally and with strong close-set punctures extending to the sides, obsolescent medially, the stria fine but strong and entire; elytra two-fifths longer than wide, three-fourths wider

than the prothorax, oblong, very obtuse at apex, the sinus very feeble but evident; striæ deep and sulciform, the intervals convex and with feeble iridescent lustre, the discal puncture only very little behind the middle. Length (♀) 3.8–4.2 mm.; width 1.5–1.7 mm. Isthmus of Panama (Colon). Three examples.

The hind tarsi are somewhat as in *Stenolophus*, the first joint as long as the next two combined.

*G. isthmianus** n. sp.—Much smaller than *bifossifrons* and rather more slender, pale rufo-testaceous throughout, each elytron very faintly clouded with a darker tint except broadly toward all the sides and more narrowly at the suture, polished throughout; head well developed, the eyes rather large, prominent, the foveæ oblique and deeply impressed; antennæ much shorter than in the preceding, with very much shorter joints, extending only to the basal part of the elytra; prothorax shorter, two-fifths wider than long, rounded at the sides anteriorly, very oblique and straight posteriorly, becoming sinuate only at the angles, which are scarcely more than right, sharp and slightly prominent; base distinctly narrower than the transversely truncate apex; surface nearly as in the preceding; elytra oblong, three-sevenths longer than wide, one-half wider than the prothorax, very obtusely rounded at apex, without evident sinus; striæ deep, intervals strongly convex suturally, less so externally, the discal punctures more posterior, at three-fifths; hind tarsi shorter, very slender, about two-thirds as long as the tibiæ, with the basal joint fully as long as the next two combined, the claws slender, scarcely at all enlarged at base. Length (♂) 2.5 mm.; width 1.0 mm. Isthmus of Panama (Colon). A single specimen, taken by Mr. Beaumont and sent with examples of the preceding species.

The anterior tarsi of the male are only feebly swollen and joints 2–4 have beneath two rows of long and extremely slender, hair-like squamules, nearly as in *Amerinus*, one at each side of each segment, mingled with rather coarse setæ, so that they are difficult to observe; the claws are moderately diverging and slender but are more or less swollen at base internally. The middle tarsi are short but do not seem to be modified on their under surface and have nearly normal claws. It is certain that some of the Central American species placed in *Bradycellus* by Bates, will have to be transferred to this genus, though I cannot identify any one of them with either of the species here described.

AGONIDUS n. gen.—This is a genus doubtfully assumed to lie in the vicinity of *Acupalpus*, being so different in facies that before the discovery of the criterion afforded by the number of supra-orbital setæ, it would probably have been associated with *Blechrus* rather than *Acupalpus*. The body is subparallel, with very large orbicular

head, moderate eyes and posteriorly oblique sides and very broadly rounded hind angles, of the prothorax. The emargination of the mentum is large and deep, broadly parabolic in form, without trace of tooth, the mouth rather abbreviated between the mandibles and the mentum, the labial palpi rather slender, the second joint almost as long as the third, with two moderate longer, and about two very short, setæ, the third joint very gradually acuminate, the fourth of the maxillary about twice as long as the third and the last joint of the outer maxillary lobe rather short and thick, moderately acuminate. The structure of the upper surface of the head is unique in the subfamily Harpalinæ, so that a separate group may have to be formed for this genus, perhaps more in the neighborhood of the Broscini. There is beyond doubt but one supra-orbital seta, situated opposite posterior third of the eye and at some distance from the latter; the epistoma is broadly circularly sinuate and it, as well as the frontal surface adjoining, is perfectly plane and without trace of frontal foveæ of any sort. The elytra are oblong, subtruncate at tip, without sharply marked striæ, these being in the form of very feeble superficial eroded lines in the position of the regular striæ, the scutellar stria distinct and rather long, parallel; the single discal puncture is unusually posterior in position, being at apical fifth, the line of lateral foveæ widely interrupted. The hind tarsi are very slender, the basal joint rather longer than the next two combined. The type may be described as follows:

***A. cephalotes** n. sp.—Rather narrowly suboblong, moderately convex, shining throughout (♂), the elytra (♀) slightly alutaceous, deep black throughout, the entire legs blackish rufo-piceous, the antennæ, extending onto the base of the elytra, very slender, black, the basal joint testaceous; head rounded, very nearly as wide as the prothorax, the surface very evenly convex, the eyes relatively moderate and not very convex; prothorax one-half wider than long, widest near apical third, the sides rounded, gradually oblique and less arcuate posteriorly and very broadly rounded through the angles to the transverse median part of the base, the latter barely three-fourths as wide as the apex, which is feebly sinuato-truncate, the surface moderately and subevenly convex, not punctate and unimpressed, finely reflexed at the sides, the stria short, very fine, the anterior transverse impression fine but sometimes visible, rather close to the apex; elytra oblong, parallel, with feebly arcuate sides, two-fifths longer than wide, between a third and fourth wider than the prothorax, the subtransverse apices truncate or just visibly sinuate; side margins only very finely reflexed; legs slender. Length (♂ ♀) 3.3–3.6 mm.; width 1.2 mm. South Africa (Wellington, about 50 miles from Cape Town). Two examples.

The anterior tarsi of the male are only very feebly swollen and joints 2–4 have beneath a double line of rather large, scale-like plates, one to each joint in each series; the middle tarsi seem to be slender and unmodified. The eyes adjoin the buccal opening and there is no lateral modification of the head beneath.

The genus *Agonidus* may be closely allied to *Amblystomus* Er.; if so the latter genus is widely out of place in the Munich catalogue, though properly placed by Lacordaire.

There are a number of exceptions to the system of characters defining the Acupalpini as here considered, such as the punctiform or elongate and not obliquely prolonged frontal foveæ of *Bradycidus* and *Tachycellus*, or the complete absence of these foveæ in *Agonidus;* also the trisetose second labio-palpal joint in *Dicheirotrichus* and *Catharellus*, but, as the summation of other structural features, as well as the general habitus of the body, places all these genera rather plainly in juxtaposition with normal members of the tribe, these exceptions merely serve to indicate some of the difficulties encountered in the way of rigorous tribal definitions, in a subfamily with so many and perplexing cross affinities and parallelisms in all directions. As previously shown, corresponding inconsistencies occur in almost every tribe of the subfamily.

Trichocellus Gangl.

The single European species before me, which is probably *placidus* Gyll., agrees very well in general characters with our own, but is rather more convex and with more deeply impressed striæ, these, in fact, becoming sulciform toward the suture; it is certainly not identical with any of the moderate number of American species represented in my collection, which without much doubt are also distinct among themselves. *Cognatus* Gyll., agrees much better with our common northern *ruficrus* than does *placidus*, but according to Dejean it is smaller in size, his measure being 3.5 mm. in length.

The body in *Trichocellus* is moderately convex, subcuneiform in outline, the elytra being a little broader behind than before the middle, and they generally have minute diffused punctulation, bearing very small erect hairs, either over the entire surface, recalling *Dicheirotrichus*, or simply near the edges; it is virtually wanting altogether, except at apex and sparsely over the margina

interval in my example of *placidus*. The abdomen has a suffused and stronger micropubiferous punctulation and in the male there is a small elongate-oval, densely pubescent spot, on the median line near the centre of the combined basal segments, which seems to be rather constant and is perhaps homologous with the small pubescent spots occurring in certain species of *Selenophorus*, although they are there very different in number and in disposition. The species may be known as follows:

Punctulation and fine pubescence confined to the marginal parts of the elytra. 2

Punctulation and pubescence extending over a large part of the elytral surface 4

2—Elytral striæ strongly impressed, the intervals rather strongly convex suturally. Body rather strongly convex, very shining throughout, the head and prothorax blackish-piceous, the latter nubilously paler apically and basally, the elytra testaceous, each with an elongate black spot near the suture behind the middle; legs testaceous; head convex, more than three-fourths as wide as the prothorax, with prominent eyes; antennæ rather long and slender, brown, the basal joint paler; prothorax not quite one-half wider than long, the sides oblique behind, the angles very obtuse but not evidently rounded; surface punctured latero-basally, the foveæ small though rather deep; median line strong, entire, the anterior transverse impression distinct; elytra nearly one-half longer than wide, behind the middle one-half wider than the prothorax, obtusely rounded behind and not sinuate; surface wholly impunctulate, except excessively minutely in the marginal interval and more broadly at apex. Length (♀) 4.0 mm.; width 1.8 mm. Europe. . . . . ***placidus** Gyll.

Elytral striæ much feebler, the intervals flat or nearly so, feebly convex suturally; body slightly less convex. 3

3—Color deep black throughout, the very fine thoracic edge and the elytral suture rufescent, the under surface deep black; legs throughout piceous-black; surface highly polished; head nearly smooth, smaller than in *placidus*, though nearly three-fourths as wide as the prothorax, the eyes rather prominent; antennæ extending to basal fourth of the elytra, slender, black, the basal joint obscure rufous; prothorax two-fifths wider than long, the sides rounded anteriorly, oblique and straight basally, the base as wide as the feebly sinuate apex, transverse medially, anteriorly oblique at the sides, the angles extremely obtuse but distinct, not rounded; surface smooth though with sparse punctures, very fine apically, stronger basally, the foveæ elongate, linear, not very deep, the anterior impression and stria as in *placidus;* elytra fully one-half longer than wide, much wider behind the middle than at base and one-half wider than the prothorax, obtusely rounded at apex, the sides broadly arcuate; sinus obsolete; surface very smooth, extremely minutely, sparsely punctulate only in the marginal interval and more broadly apically, the dorsal

puncture at three-fifths, the scutellar stria obsolete as usual; hind tarsi very slender, black. Length (♂) 4.1 mm.; width 1.7 mm. Queen Charlotte Islands,—Keen..... **boreellus** n. sp.

Color piceous-black, the prothorax nubilously paler apically and basally; elytra black, broadly, nubilously paler basally and along the suture; under surface black, the epipleura pallescent, the legs entirely or in in great part pale; general habitus nearly as in *cognatus* Gyll.; surface shining in both sexes; head with scattered punctures near the oblique foveæ and at base, three-fourths as wide as the prothorax, the eyes prominent; antennæ rather long, slender, piceous-black, with pale basal joint; prothorax nearly as in the preceding but more transverse, more than one-half wider than long, the sides more broadly rounded, the basal angles equally obtuse but rather more blunt, not so distinctly defined, the surface nearly similar but with less distinct punctuation; elytra narrower and more parallel than in the preceding though nearly similar in general form and striation, the fine punctulation more distinct and less sparse, visible though nearly the two outer intervals and more broadly apically, also slightly visible at base; hind tarsi similarly very slender and moderate in length. Length (♂ ♀) 3.8–4.3 mm.; width 1.4–1.7 mm. British Columbia (Metlakatla) to Labrador and southwardly along the Rocky Mountains to New Mexico (Cloudcroft),—Knaus. Abundant. [*Acupalpus axillaris*, *longiusculus* and *conflagratus* Mann.]. Twenty examples.

ruficrus Kirby

Color pale tawny-yellow throughout, the elytra sometimes very indefinitely and feebly infumate discally, the legs pale testaceous; surface shining in both sexes; head nearly as in the preceding, finely punctulate basally but with barely any punctures near the oblique and deep foveæ; antennæ slender, very pale brown, paler at base; prothorax nearly as in *ruficrus* and similarly transverse but with larger and more irregularly impressed foveæ, the punctulation apically and basally fine but evident; elytra much larger and longer, distinctly widest behind the middle, with arcuate sides and obtusely rounded apex, one-half longer than wide and nearly one-half wider than the prothorax; striæ very fine and rather feebly impressed, the intervals flat, the discal puncture usually but little behind the middle; minute punctulation sparse, extending a little further from the lateral, basal and apical edges than in *ruficrus*, though seldom pervading the upper part of the surface; hind tarsi very slender, the basal joint subequal to the next two combined. Length (♂ ♀) 3.8–4.3 mm.; width 1.5–1.8 mm. California (San Francisco to San Diego). [*Bradycellus nitens* Lec.]..... **nitens** Lec.

4—Minute punctulation extending about half way across the elytra medially, very broadly distributed basally and apically. Color pale testaceous, the head largely blackish, the pronotum with a small quadrate central black spot; each elytron narrowly and nubilously clouded with blackish toward the suture, excepting the sutural interval, this black area extending only a little before the middle and not attaining the apex; surface very shining; legs pale testaceous; head nearly as in *nitens* but with stronger punctulation near the

foveæ and basally, the eyes well developed and prominent; antennæ slender, dark brown, paler basally; prothorax in outline nearly as in *nitens* but with much more numerous punctures apically and basally, the basal foveæ narrower, obliquely sublinear; elytra in size and outline as in *nitens*, the striæ similarly fine and the intervals flat, the discal puncture just behind the middle; hind tarsi similarly very slender but darker in color, much darker than the femora or tibiæ. Length (♀) 4.5 mm.; width 1.85 mm. New Mexico (Fort Wingate),—Shufeldt..... **lateralis** n. sp.

Minute punctulation extending more or less evidently throughout the elytral surface..... 5

5—Body rather small in size, subcuneiform, shining, moderately convex, piceous-black, the head almost entirely black, the pronotum pallescent apically and basally, the elytra pale testaceous, with a large elongate black cloud on each near the suture; under surface black, with pale epipleura, the legs uniformly piceo-rufous throughout; head and prominent eyes well developed, as in all the preceding species, the basal punctulation indistinct except laterally, feeble near the foveæ; antennæ slender, blackish, the basal joint pale; prothorax nearly as in *nitens*, the punctulation rather dense apically and basally, the foveæ more punctiform; elytra shorter than usual, much wider behind the middle than at base, with fine, very feebly impressed striæ and nearly flat intervals, the punctulation very fine and exceptionally sparse, sometimes obsolescent toward the suture, the discal puncture at about three-fifths; hind tarsi very slender though still shorter than usual. Length (♀) 3.7–3.9 mm.; width 1.65 mm. California (Truckee)..... **monticola** n. sp.

Body unusually elongate, rather shining, very moderately convex, pale testaceous, the head broadly black medially from apex to base, the pronotum with a moderate quadrate central spot of black, the elytra clouded rather broadly with blackish toward the suture behind the middle nearly to the apex, the sutural interval always pale as usual; legs rufous, the tarsi barely at all darker; head large, of the usual form but with the fine punctulation visible throughout, except centrally; antennæ wanting in the type; prothorax transverse, rather less narrowed basally than usual but otherwise as in *nitens*, except that the punctulation is closer and more wide-spread apically and basally and the foveæ are feebler and less definite; elytra large and unusually long, more than one-half longer than wide, nearly one-half wider than the prothorax, less inflated posteriorly than usual and but very little wider behind the middle than at base, the sides arcuate; apex circularly rounded, the sinus represented only by a slightly straighter part of the edge; striæ finer and more abrupt than in any other species, the intervals perfectly flat, the punctulation only moderately sparse, stronger than usual and equally distinct and close from the sides to the suture, the discal puncture near three-fifths; legs slender. Length (♀) 4.6 mm.; width 1.9 mm. Nevada (Reno)..... **punctipennis** n. sp.

The synonymy of Mannerheim's species, given above, is from

inference merely, as I have not seen his types and the large series sent to me by Dr. Keen and Mr. Sherman display all the color variations which seem to serve largely as the basis for the published names. *Nitens* Lec., is a species evidently distinct from *ruficrus* (*axillaris*) and not synonymous as thought by the author.

Glycerius Csy.

Although so different in the elongate-oval, very convex body, with hard dense glabrous integuments and obsolescent elytral striæ, there can be but little doubt that this genus is more closely allied to *Trichocellus* than it is to *Bradycellus;* this is indicated by the even sparse punctulation of the abdomen and by the male abdominal and tarsal modifications. The head is relatively much smaller but with very prominent eyes, the antennæ rather short, mentum tooth slender and very acute, the ligula feebly dilated at apex, the inner lobe of the maxilla strongly hooked and with very coarse cilia, the last joint of the outer lobe moderate in length, gradually thicker toward base and very finely subulate apically and the second labio-palpal joint is barely at all shorter than the third. The prothorax has well defined basal angles and, along the sides in the finely reflexed edge, there is a series of erect setæ arising from very moderate punctures and recalling a rather similar structure in *Nothopus* and *Hartonymus*. One section of smaller species has only one marginal seta, the others having become obsolete, but a careful inspection of the fine marginal gutter shows a feeble irregular crenulation, this being a vestigial remnant of the normal series of definite setigerous punctures. The elytra have all the elytral striæ, excepting the deeply impressed sutural and feeble eighth and ninth, completely obsolete or sometimes represented by very feebly impressed punctulation. The discal puncture and scutellar stria are obsolete, although the annuliform fovea of the latter is well developed. The anterior tarsi of the male are feebly dilated and have beneath joints 2–4 slender, hyaline, acutely pointed and decumbent squamules, extending transversely and closely outward from the median line, the first joint with only one or two squamules at apex and not transversely arranged; the middle tarsi are slender and unmodified and the posterior slender, with the first three joints decreasing uniformly and rapidly in length. There

are on the median line of the male abdomen, near the base, two very small rounded and densely pubescent spots, analogous to that of *Trichocellus* but still smaller; it will be noted that they are arranged longitudinally on the median line and not transversely in pairs, as is the case with the somewhat analogous spots of *Selenophorus riparius* and certain allied forms. In *Trichocellus* these spots are usually coalescent, forming a single elongate spot. The species of *Glycerius* are few in number and may be recognized as follows:

Pronotum plurisetose along the lateral edges.....2
Pronotum with a single marginal seta situated far before the middle; body smaller in size and more slender as a rule.....3

2—Body stouter in form, paler piceo-rufous in color, the elytra slightly clouded with blackish; surface shining, glabrous; head about three-fifths as wide as the prothorax, impunctate, the eyes well developed and very prominent, the oblique foveæ rather fine; antennæ extending slightly behind the prothorax, the first three joints glabrous though with the usual setæ; prothorax two-fifths wider than long, the sides broadly rounded, feebly converging and broadly, very slightly sinuate posteriorly; base transverse medially, arcuately and anteriorly oblique at the sides to the somewhat obtuse but distinct angles, the apices of which are but little blunted; apex truncate, narrower than the base; surface smooth and polished, with a very fine stria, the foveæ small, subelongate, feebly impressed and with a few minute punctures; elytra fully one-half longer than wide, a third to fourth wider than the prothorax, parallel, with broadly and evenly arcuate sides and gradually ogival apex, without vestige of sinus; marginal line of foveæ widely interrupted medially; legs rather slender, pale testaceous; under surface of the hind body nearly black, the epipleura pale. Length (♂ ♀) 5.2–6.2 mm.; width 2.1–2.5 mm. California (Siskiyou to San Diego). Abundant. [*Acupalpus nitidus* Dej.—subsequently placed in *Bradycellus*].....**nitidus** Dej.

Body somewhat as in the preceding but not so large and of much more slender form and darker general coloration, frequently nearly black throughout, the legs and epipleura always pale; head relatively somewhat larger but otherwise nearly similar, the antennæ dark piceous-brown, paler basally, relatively longer than in *nitidus;* prothorax quite different, about a third wider than long, the sides strongly rounded anteriorly, thence rather strongly converging and broadly, strongly sinuate to the basal angles, which are right and very sharply marked; base nearly similar but barely visibly wider than the truncate apex; surface nearly similar but with the foveæ slightly narrower and more elongate; elytra nearly as in *nitidus* but somewhat narrower, sometimes perfectly smooth or having feebly impressed series of feeble punctulation taking the place of the regular striæ as in *nitidus;* not only is the fovea of the scutellar stria well developed, but there is a small puncture at the basal end of the first stria, which remains distinct even in those occasional individuals

having the sutural stria obsolete basally. Length (♂ ♀) 4.7–5.4 mm.; width 1.8–2.2 mm. Mexico (Amecameca and Tres Marias in Morelos)..... *obsoletus Say

3—Hind angles of the prothorax right or very nearly so; abdominal pubescent spots (♂) well separated. Similar in form to *nitidus* but smaller; body entirely black, highly polished above, usually with distinct greenish tinge, rarely obscurely suffused with testaceous, especially toward the base of the elytra; legs and base of the antennæ testaceous; prothorax rather feebly narrowed posteriorly, the sides sinuate just before the hind angles; basal impressions rather broad and with a few punctures; elytral striæ, except the sutural, faint or obliterated; lower surface, except the prosternal side-pieces, sparsely punctate, each puncture bearing a short hair; ventral surface finely but distinctly alutaceous, shining. Length 3.5–5 mm. Oregon to southern California..... politus Fall

Hind angles obtuse, the prothorax more distinctly narrowed posteriorly; abdominal pubescent spots (♂) confluent, this assumed in the case of *intermedius;* size small..... 4

4—Sides of the prothorax slightly sinuate before the hind angles, the latter more sharply defined; elytra three times as long as the prothorax; color black, highly polished, with distinct bronze or green-bronze surface lustre, the legs and base of the antennæ pale; prothorax more distinctly narrowed behind than in *politus;* basal impressions with very few fine punctures, otherwise nearly as in *politus*. Length 4.2–4.5 mm. California (San Bernardino Mts. 5000–7000 feet—the typical locality—and Lake Tahoe). intermedius Fall

Sides of the prothorax scarcely visibly sinuate before the angles, which are less sharply defined; elytra two and one-half times as long as the prothorax; hind angles of the prothorax more obtuse than in *intermedius*, the elytra relatively shorter, otherwise nearly similar; abdominal pubescent spots (♂) contiguous. Length 3.5–4 mm. California (Pasadena, 1000 feet elevation)..... obtusus Fall

The species of the second section of the genus are defined above from the characters given by Mr. H. C. Fall (Journ. N. Y. Ent. Soc., 1905, p. 175). Among my series *politus* is easily identified and represented by numerous examples, but whether or not either of the others is present among individuals taken at San Diego by Dunn, or in Monterey Co., at Lake Tahoe or Reno, Nevada, by myself, I am uncertain; they are very closely allied among themselves. Mr. Bates in the "Biologia," defined several varietal forms of *obsoletus*, but it would take large and carefully collected series to demonstrate the validity of them, even as subspecies; *obsoletus*, however, is different from *nitidus* and valid in every way as a species.

Pelmatellus Bates.

This is an isolated genus in the Acupalpini, because of the vestiture of the anterior and middle tarsi of the male; these are subequally and distinctly dilated and the soles are solidly squamose as in the Anisodactylini, to which tribe there is, however, no other suggestion of similarity. In fact the species bear a close resemblance to several of the genera allied to *Bradycellus*. The mouth parts are nearly as in *Glycerius*, but the emargination of the mentum is much deeper than in *Bradycellus*, the tooth strongly developed. There is no trace of abdominal sexual characters in the form of surface modifications, and there is no trace of the diffused abdominal punctulation of the two preceding genera. The hind tarsi are slender, with the first three joints decreasing uniformly and not very rapidly in length, the first much shorter than the fifth. *Pelmatellus* is moderately numerous in species, extending in range as far to the southward as Guatemala; it was held to represent a distinct tribe or subfamily by Bates, but scarcely merits such distinction. The two species in my collection may be known as follows:

Form oblong, moderately convex, shining, piceous-black above and beneath, the elytra deeper black, the suture and exterior margin faintly pallescent; lustre non-metallic but sometimes faintly greenish; legs pale testaceous; head moderate, evidently more than half as wide as the prothorax, impunctate, the eyes moderate, prominent, the oblique foveæ distinct; antennæ slender, nearly attaining basal fourth of the elytra, fuscous, paler basally; prothorax one-half wider than long, with the sides subevenly rounded, widest just before the middle, apex feebly sinuate, with narrowly rounded angles, narrower than the base, which is finely beaded throughout, transverse medially, slightly arcuate laterally, the angles very obtuse though sharply defined, not rounded; surface evenly convex, smooth, finely reflexed at the sides throughout, with a rather strong entire stria, the foveæ shallow, oblong, widely impressed and with a few minute punctures; elytra oblong, parallel, with feebly arcuate sides and rapidly very obtuse apex, one-half longer than wide and fully a fourth wider than the prothorax, the sinus rather feeble though evident; striæ fine, the scutellar oblique, moderate in length, the intervals flat; discal puncture at two-thirds; marginal line of foveæ widely interrupted; hind tarsi three-fourths as long as the tibiæ. Length (♂ ♀) 5.0–6.0 mm., width 2.15–2.5 mm. Arizona and New Mexico (Cloudcroft). Twenty examples. [*Bradycellus lucidus* Csy.; *Tachycellus turbatus* Fall]..... **lucidus** Csy.

Form oblong-oval, moderately convex, very shining, black, the upper

surface with feeble violaceous reflection: under surface black or nearly so, the legs pale testaceous; head almost as in the preceding but nearly three-fifths as wide as the prothorax; antennæ rather slender though somewhat strongly compressed, blackish, the two basal joints pale; prothorax nearly one-half wider than long, throughout as in *lucidus*, except that the sides are rather more strongly arcuate; the very obtuse basal angles are not only not rounded but their apices are minutely prominent in the type; marginal bead of the base narrowly interrupted at the middle; elytra shorter, two-fifths longer than wide, a fourth wider than the prothorax, parallel, with broadly arcuate sides and finely reflexed edges, the apex more produced suturally, the sinus much stronger, rather deep; striæ extremely fine, shallow, not impressed, the scutellar oblique, feeble; discal puncture fine, at three-fifths. Length (♀) 5.5 mm.; width 2.2 mm. Mexico (Salazar, Mex.),—Wickham. A single example.

***sinuosus** n. sp.

Sinuosus may be allied to *stenolophoides* Bates, but the basal thoracic angles are said to be rounded in that species and the elytra rufescent laterally. The Cloudcroft examples described by Fall as *turbatus*, are exactly similar to the original type of *Bradycellus lucidus* Csy., which is not alluded to by Fall in his article on the *Tachycellus*-like genera, though plainly printed in the Henshaw list.

Episcopellus n. gen.

The type of this genus, the *Feronia autumnalis* of Say, has been shifted back and forth from one tribe of the Harpalinæ to another, in a most unaccountable manner. It is plainly a Bradycellid as maintained by LeConte, who however unfortunately placed two true Harpalids with it, and, as the base of the prothorax is as strongly and completely beaded here as in *dichrous* and *vulpeculus*, he probably for that reason consented to have it leave *Bradycellus* to go to *Harpalus* in company with those species. The body is oblong, rather depressed, the head moderate and perfectly normal in the tribe, except that the frontal foveæ are obliquely prolonged toward the eyes only for a short distance, and the labial palpi are unusually long, slender, with the second and third joints equal, the former bearing two long setæ and one or two that are short and inconspicuous. The third antennal joint is somewhat pubescent in about outer half. The anterior male tarsi are very moderately dilated, the intermediate feebly so and both have beneath two approximate series of large elongate decumbent longitudinal

squamæ. The hind tarsi are slender, the basal joint as long as the next two and longer than the fifth. The abdomen is feebly punctulate at base, but bears no special sexual marks in the male. The two known species are the following:

Form oblong-suboval, rather feebly convex, polished throughout, deep black, without metallic lustre of any kind, the edges of the pronotum and elytra diaphanously paler; under surface piceous-black, the legs testaceous; head smooth, the eyes only moderately prominent; antennæ extending fully to the thoracic base, pale testaceous in color; prothorax not quite one-half wider than long, widest anteriorly, where the sides are rather strongly rounded, thence feebly oblique and nearly straight to the basal angles, which are rather obtuse but sharply defined and even minutely subprominent; base transverse, feebly arcuate laterally, strongly beaded and but slightly wider than the apex, which is feebly sinuate, with broadly rounded angles; surface even, smooth, finely and evenly reflexed at the sides, with a rather distinct impressed subentire stria, the foveæ small and linear, rather shallow but distinct, barely at all punctulate; elytra oblong, parallel, with feebly arcuate sides, not one-half longer than wide, fully a fourth wider than the prothorax and rapidly obtusely ogival at apex, with very feeble sinus; striæ rather fine but well impressed, the scutellar long, subparallel, the discal puncture near two-thirds; intervals feebly convex throughout the width; marginal series of foveæ only imperfectly interrupted medially. Length (♂ ♀) 6.5–7.0 mm.; width 2.6–3.0 mm. Long Island to Indiana.
autumnalis Say

Form more oblong and elongate, similar in coloration and lustre; head and antennæ nearly similar, the former rather more elongate, the neck distinctly constricted; prothorax more quadrate, two-fifths wider than long, widest only a little before the middle, the sides more evenly and more feebly arcuate, otherwise nearly similar, except that the foveæ are larger, much deeper and with numerous scattered distinct punctures; elytra similar throughout but longer, one-half longer than wide and not quite a fourth wider than the prothorax, the scutellar stria still longer and the lateral line of foveæ more completely interrupted medially; hind tarsi not quite so slender but otherwise similar. Length (♀) 7.2 mm.; width 2.9 mm. District of Columbia. . . . . **nitescens** n. sp.

In this genus the emargination of the mentum is notably deeper than in the true *Bradycellus*, the tooth similarly strongly developed. *Nitescens* is allied rather closely to *autumnalis* but, on inspection with a series of the latter at hand, it is observed to be more elongate and more parallel and somewhat larger in size; the prothorax is more quadrate, much less transverse and is less inflated at the sides anteriorly; I am under the impression that the type was found near an electric light of the city in July some years ago.

Tachycellus Moraw.

No one seems to have ever had more than a vague notion as to what the genus *Tachycellus* of Morawitz might really be. Chaudoir assigned to it such an incongruous mixture that it was entirely rejected by LeConte in his treatment of our minute Harpalids (Proc. Acad. Phila., 1868, p. 379). Afterwards G. H. Horn conceived the idea that it included all those forms having three glabrous antennal joints, but, as pointed out by Fall, the warrant for that assumption is not clear. There exists, however, at the present time, a tradition that there must be three glabrous antennal joints and furthermore that the *Harpalus nigrinus* of Dejean, is a typical exponent of the genus. Accepting this as true, there is no other species than *nigrinus* that can properly form part of *Tachycellus*, because of a peculiarity in the form of the frontal foveæ stated in the above table of genera; the other species placed in *Tachycellus* by Horn, will therefore have to form another genus, to which the name *Triliarthrus* is here assigned. The mental emargination is relatively narrow and deep and the tooth strong, with its acutangular apex blunt at tip. The ligula is feebly dilated apically, the paraglossæ attached nearly throughout its length but having their external angle at apex narrowly prolonged, as in some of the Anisodactylini. The assumed type of the genus may be described as follows:

Form oblong, moderately convex, very shining, deep black and without metallic lustre, the under surface and femora black, the tibiæ pale, black apically, the tarsi black; head rather small, barely three-fifths as wide as the prothorax, rather constricted at base and with moderately prominent eyes; antennæ slender, black, with pale basal joint, the third joint virtually glabrous, though with pallid setæ; prothorax transversely quadrate, a third to two-fifths wider than long, feebly rounded at the sides and widest anteriorly, the sides very feebly converging and straight thence to the basal angles, which are but little more than right and sharply marked though not prominent; base transverse, strongly beaded laterally, the bead interrupted in median half, very slightly wider than the sinuato-truncate apex; surface smooth, finely, evenly reflexed at the sides and with a distinct median stria from the obsolescent anterior impression to the base, the foveæ linear, a third the total length, rather deep though impressed and not evidently punctate; elytra relatively large, one-half longer than wide and one-half wider than the prothorax, parallel, with feebly arcuate sides and obtusely rounded apex, the sinus almost obsolete; striæ very fine, not deep though

acute, the scutellar extremely short, sometimes obsolete; intervals flat or nearly so, the discal puncture strong, at four-sevenths, the lateral line of foveæ medially interrupted; hind tarsi short, not three-fifths as long as the tibiæ, the first joint not quite as long as the next two combined; anterior tarsi (♂) feebly dilated and biseriately squamulose beneath, the middle tarsi slender and unmodified. Length (♂ ♀) 4.7–5.2 mm.; width 1.7–2.0 mm. California (Lake Tahoe and in Siskiyou Co.). [*Harpalus nigrinus* Dej.—Alaska; *Geobænus quadricollis* Lec.—Lake Superior; *Trechus tibialis* Kirby]..... **nigrinus** Dej.

This species seems to be very widely disseminated through the colder parts of North America but is not very abundant.

Triliarthrus n. gen.

Except in the oblique linear form of the frontal foveæ and in a certain difference of habitus, due to the arcuate or anteriorly swollen sides of the prothorax, there is very little difference between this genus and the preceding. The ligula and paraglossæ, mental emargination and tooth, are all nearly similar; the labial palpi are slender, the second and third joints exactly equal in length. The first three joints of the antennæ are glabrous, the third with merely a single corona of long setæ at apex and the scutellar stria is generally very short, sometimes almost obsolete and most distinct in *kirbyi*. The anterior male tarsi are distinctly dilated and have beneath a double row of very large horizontal, thin and hyaline plates, which are transversely plicate but not divided, the middle tarsi slender, not at all or but feebly dilated, though usually having a double series of small slender squamæ; the hind tarsi are slender, with the basal joint not quite as long as the next two combined and generally not as long as the fifth. The species are moderately numerous as follows:

Species of the Atlantic regions; basal angles of the prothorax variable..2
Species of the true Pacific coast fauna; basal angles always sharply defined.....5
2—Basal angles of the prothorax obtuse and obviously rounded.....3
Basal angles obtuse but sharply defined and generally minutely prominent.....4
3—Body elongate-suboval, convex, shining, black, the edges of the pronotum finely, diaphanously pale, the elytra testaceous, sometimes obscure, with a large feeble and very indefinite darker cloud, the base before the carina deep black; under surface black, the legs and epipleura obscure rufous; head moderate, with rather prominent

eyes, the antennæ slender, blackish, with the basal joint pale; prothorax two-fifths wider than long, widest well before the middle, the sides subevenly rounded, less so basally, the base transverse and unmargined, arcuate and very finely beaded near the sides, barely at all wider than the feebly sinuate apex; basal angles rather broadly rounded; surface smooth, very finely, evenly reflexed at the sides, with an entire and distinct median stria, the foveæ sublinear but broad and very shallow, with scattered distinct punctures; elytra one-half longer than wide and nearly one-half wider than the prothorax, parallel, broadly arcuate at the sides and rather strongly rounded at apex, the sinus wholly wanting; striæ fine, the scutellar distinct, oblique; intervals flat, the discal puncture at four-sevenths (♂) or three-fifths (♀); lateral line of foveæ widely interrupted; hind tarsi three-fourths as long as the tibiæ (♂) or two-thirds (♀). Length (♂ ♀) 5.2–5.7 mm.; width 1.9–2.2 mm. New York to Illinois. Rather abundant. [*Stenolophus "badipennis"* Hald.; *Geobænus ruficrus* Lec. nec Kirby and *lugubris* Lec.].

badiipennis Hald.

Body still more elongate-oval, shining, the head piceous-black; prothorax dark brown, with fine rufous margins, the elytra obscure testaceous, with paler suture nearly as in the preceding, the under surface and legs similar; head evidently larger and with more prominent eyes, nearly three-fourths as wide as the prothorax, the antennæ almost similar; prothorax nearly similar in form and surface, except that the basal angles though obtuse are much more definite, only narrowly rounded at their apices; elytra much longer, three-fifths longer than wide, two-fifths wider than the prothorax, parallel, with arcuate sides and strongly rounded apex, similarly without trace of sinus, with finer and feebler striæ; intervals flat, not becoming convex at apex as in the preceding but perfectly flat even near the sutural angles, the discal puncture (♂) at three-fifths; anterior tarsi (♂) rather strongly, the middle feebly though evidently, dilated, the posterior stouter than in *badiipennis* though similar in length. Length (♂) 5.6 mm.; width 2.0 mm. Massachusetts.

protractus n. sp.

Body smaller and much more slender than in *badiipennis*, shining, deep black, the elytra feebly and nubilously pallescent laterally, except toward apex, and the suture finely rufescent; under surface and legs black, the tibiæ pallescent basally; head very moderate, barely three-fifths as wide as the prothorax, the eyes large, moderately prominent; antennæ slender, extending well behind the thoracic base, the first joint pale, slightly maculate, the next three black, the remainder dark brown; prothorax not quite one-half wider than long, parallel, with very evenly and moderately rounded sides; apex feebly but distinctly sinuate, with rather blunt angles and equal to the base, the basal angles broadly rounded, the very fine reflexed margin curving around the basal angles and then disappearing; surface smooth, the stria fine but distinct, entire, the foveæ broadly and feebly impressed, sublinear and with very few punctures; elytra one-half longer than wide and two-fifths wider than the prothorax,

rather strongly rounded behind in apical two-fifths, without trace of sinus; striæ fine, the scutellar rather short, oblique, the discal puncture at three-fifths; hind tarsi a little longer than in *badiipennis;* middle tarsi (♂) very slender. Length (♂) 4.9 mm.; width 1.8 mm. New York (West Point),—Wirt Robinson..... **properus** n. sp.

4—Body oblong-suboval, rather convex, strongly shining, piceous-black, the thoracic margins finely rufous, the elytra dark testaceous, with a large blackish cloud except basally and along the suture; under surface black, the epipleura and legs bright testaceous; head rather short, three-fifths as wide as the prothorax, with well developed and prominent eyes; surface smooth throughout; antennæ slender, dark, the first three joints rufous; prothorax two-fifths wider than long, widest near apical third, the sides strongly rounded, oblique basally, becoming sinuate only at the obtuse though sharp and minutely prominent angles; base transverse, only beaded very near the angles, evidently wider than the very moderately sinuate apex; surface as in *badiipennis,* except that the foveæ are larger, deeper and more rounded and with coarser and denser punctures, which spread finely and sparsely far beyond the foveæ and to the sides, the latter narrowly punctured a far as the apex; elytra not quite one-half longer than wide and two-fifths wider than the prothorax, parallel, with very obtusely ogival apex, the sinus represented by a slightly straighter edge; striæ somewhat fine but strongly impressed, the scutellar rather long and deep; intervals broadly convex, strongly so suturad. Length (♂) 5.0 mm.; width 1.9 mm. Long Island . [*Tachycellus kirbyi* Horn]..... **kirbyi** Horn

Body oblong-suboval, more elongate than in *kirbyi,* shining; head deep black; prothorax testaceous, with a large transverse central black area; elytra testaceous, with a large common feeble blackish cloud, the suture testaceous at least posteriorly; under surface and legs as in the preceding; head very smooth, more elongate, nearly two-thirds as wide as the prothorax, the antennæ as in *kirbyi;* prothorax two-fifths wider than long, widest at apical third, the sides strongly rounded, oblique, becoming gradually feebly sinuate near the obtuse hind angles, which are sharp and minutely, distinctly prominent; base transverse, becoming abruptly strongly oblique but scarcely at all beaded at the sides, as wide as the sinuato-truncate apex, sometimes apparently a little narrower; surface as in *kirbyi,* except that the coarse widely disseminated punctures are confined to the latero-basal regions, only a few being scattered along the finely reflexed edges; elytra fully one-half longer than wide, not quite one-half wider than the prothorax, the striæ and convex intervals nearly as in *kirbyi,* the discal puncture near three-fifths (♂) or two-thirds (♀); hind tarsi rather long and slender. Length (♂♀) 6.0–6.3 mm.; width 2.1–2.3 mm. Pennsylvania, North Carolina and Illinois. Rather abundant. [*Feronia atrimedia* Say and *Trechus similis* Kirby]..... **atrimedius** Say

5—Form elongate-oboval, broader behind the middle of the elytra, convex, deep shining black throughout above and beneath, the fine reflexed thoracic margins diaphanously rufescent; femora black, the

tibiæ testaceous, blackish apically; tarsi piceous, the anterior paler (♂); head two-thirds as wide as the prothorax, very smooth, with rather prominent though moderate eyes; antennæ blackish, the basal joint rufous; prothorax relatively rather small, two-fifths wider than long, widest near apical two-fifths, the sides rather strongly rounded, converging and straighter basally, the basal angles but little more than right, sharply defined and minutely prominent; base transverse, just visibly arcuate and sometimes faintly beaded near the sides, slightly wider than the rather feebly sinuate apex; surface smooth, with a fine distinct subentire median stria, very finely and evenly reflexed at the sides; foveæ short, linear, moderately impressed and with some extremely fine inconspicuous punctures which do not extend at all along the sides; elytra relatively large and posteriorly subinflated, obtusely ogival at apex and without sinus, fully one-half longer than wide and two-thirds wider than the prothorax, the striæ very fine, feeble, much finer than in any other species of the genus, the scutellar very short and feeble; intervals perfectly flat throughout to the suture and apices, the discal puncture fine, very feeble, at three-fifths; hind tarsi long and slender. Length (♂ ♀) 5.7–5.8 mm.; width 2.0–2.2 mm. Washington State and California (northern). [*Tachycellus conformis* Fall].

conformis Fall

Form rather narrower but otherwise nearly similar, smaller in size, convex, very shining, deep black, the fine thoracic bead very indistinctly rufous; under surface, legs and antennæ somewhat as in *conformis;* head nearly similar, constricted at base, with moderate prominent eyes; prothorax relatively larger, two-fifths wider than long, widest and with strongly rounded sides at apical third, the sides thence converging, becoming gradually straight to the basal angles, which are very evidently more than right, very sharply defined though only very minutely and feebly prominent; base, apex and surface nearly similar, except that the foveæ are larger, deeper, more broadly impressed and with numerous rather coarse and very distinct punctures; elytra nearly similar in form but not so broad and barely one-half wider than the prothorax, the sinus obsolete; striæ rather fine but stronger than in *conformis* and evidently impressed, rather strongly so and with distinctly convex intervals suturally; scutellar stria very short; discal puncture strong, at about three-fifths; hind tarsi long and slender; male more distinctly larger and heavier than the female than in *conformis,* though this relation is also evident there. Length (♂ ♀) 4.7–5.7 mm.; width 1.7–2.1 mm. California (Hoopa Valley, Humboldt Co.). Three examples. . . **tetricus** n. sp.

The following species is somewhat doubtfully attached to the present genus:

T. suturalis Lec. (*Acupalpus*)—Name subsequently changed to *nebulosus* by LeConte, because of preoccupation.—Rufo-piceous, shining; head smooth, the frontal impressions oblique, deep; frontal suture deeply impressed, also with a puncture on the vertex; palpi testaceous; antennæ

rufo-piceous, the three basal joints testaceous; prothorax rufous, wider than the head, slightly shorter than wide, quadrate; apex slightly sinuate, with the angles rounded; sides rounded, slightly converging posteriorly; base truncate, oblique at the sides, with the angles obtuse, not rounded; surface slightly convex, the anterior transverse impression somewhat distinct, arcuate, remote from the apex, the longitudinal stria entire; foveæ rounded, densely punctate; elytra rather flat, parallel, rounded at apex, slightly wider than the prothorax, more than twice as long as wide, rufo-piceous, shining, the margin finely and the suture rufous, striate, the scutellar stria long, straight; intervals convex; under surface rufo-piceous; epipleura and legs testaceous. Length 4.25 mm.; width 1.5 mm. Georgia.

Mr. Fall, who examined the type in the LeConte collection, intimates (N. Y. Journ., 1905, p. 171) that this species cannot be referred to the present genus, as it closely resembles *Bradycellus rupestris* and may possibly not differ from it specifically. But this conclusion is probably due to hasty or inaccurate observation, as the description clearly indicates that the scutellar stria is well developed; it is wholly obsolete in *rupestris* and allied species. This is a very important point which demands further comparative study of the type.

Catharellus n. gen.

The only known species of this genus resembles those of *Stenocellus* in habitus, but differs in some important features. The body is similarly elongate, parallel and moderately convex, differing thus from the more ventricose outline of *Bradycellus*, but there is no trace of the important annular fovea at the base of each elytron, nor of the basal punctate impressions of the pronotum. The emargination of the mentum is moderately shallow, with a distinct and acutely angular tooth. The labial palpi are rather slender, the second and third joints equal in length, the former convex, cylindro-oval and certainly bearing three setæ, one on the inner and one on the anterior side at apex and one on the anterior side behind the middle, the third joint is rapidly subulate at tip as in *Bradycellus* and, in the male, has a large rounded cavity medially. This impression seems to affect the males of most species of the Acupalpini, as discovered by Horn, but I have also occasionally noted it to some extent in females, whether it is due in part at least to post-mortem contraction or not I cannot say. The type may be described as follows:

Elongate, subparallel, moderately convex, black, the elytral suture and sides posteriorly feebly rufescent; under surface black, the legs obscure rufous; surface rather shining though feebly alutaceous; head smooth and convex, fully three-fourths as wide as the prothorax, with prominent eyes, the vertex with a feeble central puncture, the frontal foveæ deep, oblique, attaining the eyes; antennæ notably stout, black, half as long as the body, the basal joint alone rufous; prothorax a third wider than long, widest at apical third, the sides strongly rounded, oblique and feebly arcuate posteriorly, finely sinuate very near the basal angles, which are obtuse but sharp and minutely prominent; base feebly arcuate, wholly unmargined, equal in width to the sinuato-truncate apex; surface nearly even, with feeble anterior impression and very finely reflexed along the sides, somewhat flattened and opaculate latero-basally but impunctate, the stria fine and subentire; elytra one-half longer than wide and two-fifths wider than the prothorax, parallel, with feeble arcuate sides and gradually circularly rounded apex, the sinus wholly wanting; striæ fine but rather strong; intervals flat or virtually so throughout, not more convex at tip; discal puncture completely wanting; lateral line of foveæ broadly interrupted medially; hind tarsi rather short, slender, three-fifths as long as the tibiæ, the first four joints uniformly decreasing in length, the first much shorter than the fifth. Length (♂) 4.3 mm.; width 1.5 mm. New York (Lake Champlain), and Ontario (Montreal). Lake Superior,—LeConte. [*Geobænus cordicollis* Lec.]..... **cordicollis** Lec.

The anterior tarsi of the male are only slightly swollen and appear to have two rows of elongate inconspicuous squamæ beneath, the middle tarsi undilated and unmodified. The absence of a discal puncture on the elytra is an important character not specially alluded to by LeConte, although no puncture is mentioned in his description. The above described example, which I took at Bluff Point, may be smaller than the type of LeConte, though the published measurements are probably excessive, but it appears to be the same specifically; the Montreal specimen, recently received from Mr. Knaus, is precisely similar to the New York representative. It is a remarkable species and demands generic isolation in my opinion.

Stenocellus n. gen.

The numerous species of this genus may be distinguished at once from *Bradycellus* by their more slender elongate parallel and subdepressed form. The prothorax is as in the preceding in general form, but is always more or less impressed and punctate latero-basally and, as in *Triliarthrus*, may have the basal angles either

minutely prominent or rounded; the sides are, however, never broadly sinuate basally, with sharply marked right angles, as they are in the next five genera of the table given above. The elytra always have a discal puncture well behind the middle and a clearly defined annular basal fovea, but there is seldom any trace of a scutellar stria or apical sinus, the elytra always being evenly and circularly rounded at tip; the lateral line of foveæ are widely interrupted medially. The emargination of the mentum is rather shallow, the tooth narrowly acute and well developed. The labial palpi are of quite a different form from that characterizing the preceding genus; the second joint is unusually short, broad, flattened, subtriangular, with the anterior edge acute and bearing two long setæ, the third joint distinctly longer, inflated basally, finely subulate apically and with a deep impression at least in the male. The inner lobe of the maxilla is strongly hooked at apex and the last joint of the outer lobe gradually inflated basally and drawn distally into a long slender subulate apex. The antennæ are slender and the third joint does not have any of the very short decumbent pubescence borne by the following joints, though having numerous erect setæ. The frontal foveæ are deep and are prolonged in a fine oblique line to the eyes. Male sexual characters will be described under several specific headings below. The species are very numerous but rather closely allied among themselves in some parts of the series and especially near *rupestris;* they are widely distributed over the entire continent as far southward as the table land of Mexico and are generally abundant individually. Those represented in my cabinet are as follows:

Hind angles of the prothorax obtuse but not rounded and more or less evidently though minutely prominent.....2
Hind angles distinctly and broadly rounded.....26
2—Body less minute, between 3 and 4.5 mm. in length.....3
Body minute, always distinctly under 3 mm. in length.....21
3—Species of the Atlantic region; surface always very shining.....4
Species of the Rocky Mountain and Sonoran regions.....10
Species of the true Pacific faunal region.....14
4—Antennæ notably stout. Body and legs testaceous in color, the head but little darker, the elytra with a large blackish cloud posteriorly; under surface of the hind body black; head three-fourths as wide as the prothorax, with the usual prominent eyes; antennæ half as long as the body, fuscous, paler basally; prothorax a fourth wider than long, widest near apical third, the sides there rather strongly rounded,

thence oblique and very feebly arcuate to the minutely prominent basal angles; base transverse, anteriorly arcuate at the sides, not quite as wide as the truncate apex; surface convex, smooth, extremely finely, evenly reflexed at the sides, feebly impressed and strongly, closely punctate latero-basally, the stria fine and subentire; elytra one-half longer than wide and two-fifths wider than the prothorax, parallel, circularly rounded at apex, the striæ deeply impressed, the scutellar wholly wanting, the intervals distinctly convex; discal puncture near three-fifths; hind tarsi slender, fully three-fourths as long as the tibiæ, the basal joint as long as the next two, the fifth as long as the preceding three combined. Length 3.4–3.6 mm.; width 1.15–1.2 mm. New Jersey (Atlantic City).....**supplex** n. sp.

Antennæ slender.....5

5—Antennæ unusually long, more than half as long as the body, filiform and very slender on the narrow side, apically increasing in width on the compressed side. Color throughout as in the preceding, except that the elytra are largely blackish, broadly pale basally, less so laterally and finely along the suture, and that the abdomen is gradually pale apically; head relatively much smaller and with less prominent eyes, about three-fifths as wide as the prothorax, the vertex with a central puncture; prothorax more transverse, two-fifths wider than long, widest near apical third but with the sides more evenly rounded throughout than in the preceding, distinctly arcuate to the minute acute prominence at the obtuse basal angles; base narrower than the sinuato-truncate apex; surface as in the preceding, except that the basal foveæ are smaller, deeper and more definite and with a much smaller punctured area; the median stria is stronger; elytra fully one-half longer than wide and less than two-fifths wider than the prothorax, the striæ and intervals as in *supplex;* hind tarsi slender, fully three-fourths as long as the tibiæ, the basal joint not as long as the next two, the fifth distinctly shorter than the preceding three combined; claws similarly very slender; anterior tarsi (♂) distinctly dilated, each of the first four joints with two large, obliquely diverging scale-like plates, the middle tarsi undilated and unmodified beneath. Length (♂) 4.2 mm.; width 1.4 mm. New York (Catskill Mts.), —H. H. Smith.....**antennalis** n. sp.

Antennæ half as long as the body, not increasing in width apically on the compressed side.....6

6—Elytra with a very short though evident scutellar stria, being the only known exception in the entire genus. Body elongate-suboval, rather convex, very shining, pale testaceous in color, the head red-brown and the prothorax clear rufous, the elytra testaceous, with a common rounded posterior black spot crossing the suture; under surface of the hind body entirely black, the epipleura and legs pale testaceous; head not large though nearly three-fourths as wide as the prothorax, with prominent eyes; antennæ rather more developed than in any of the four following species, dark brown, paler basally; prothorax rather small and very feebly transverse, not a fourth wider than long, otherwise nearly as in the preceding, except that the base is not evidently narrower than the truncate apex; stria deep and entire;

foveæ broadly impressed and closely punctate; elytra barely one-half longer than wide, parallel, with rather more arcuate sides than usual, not quite one-half wider than the prothorax, the striæ rather deeply impressed; intervals convex; dorsal puncture at three-fifths; tarsi nearly as in *antennalis*, the anterior (♂) rather less dilated but with similar large oblique scale-like hyaline plates, acutely pointed at their apices. Length (♂) 3.7 mm.; width 1.2 mm. New York (near the City),—Jülich..... **insulsus** n. sp.

Elytra never having a trace of scutellar stria, as is the case also in all the subsequent species.....7

7—General color more testaceous, the pronotum always clear rufous throughout.....8

General color more blackish, the pronotum always largely dark or mottled with blackish.....9

8—Body larger, testaceous, shining, the head but little darker; elytra parallel, broadly clouded with blackish, with the suture paler; under surface of the hind body piceous-black; head nearly as *insulsus*, the antennæ more slender and less broadly compressed, similar in color; prothorax fully a fourth wider than long, the sides rather strongly rounded, unusually converging basally to the minutely prominent angles; base distinctly narrower than the truncate apex; surface nearly as in the preceding, except that the median stria is finer and does not attain the apex as a rule; elytra longer, almost three-fifths longer than wide, parallel, with feebly arcuate sides and evenly rounded apex, the striæ impressed, with rather convex intervals, except apically, where the striæ are more superficial and the intervals flat; discal puncture near apical third; basal joint of the hind tarsi much shorter than the next two, the fifth nearly as long as the preceding three; sexual characters as in the preceding. Length (♂ ♀) 3.4–4.5 mm.; width 1.2–1.4 mm. Long Island and North Carolina to Missouri. [*Trechus rupestris* Say; *T. flavipes* Kirby; *Acupalpus elongatulus* Dej.]..... **rupestris** Say

Body much smaller and less elongate, the head nearly black; elytra black in about apical half, with the usual pale suture; under surface of the hind body black, the epipleura and legs very pale; head nearly three-fourths as wide as the prothorax, with moderate though very prominent eyes; antennæ dark, paler basally; prothorax nearly a third wider than long, the sides more strongly rounded anteriorly than in *rupestris* and becoming rather more sinuate at base, the minutely prominent angles rather more acute and distinct; surface nearly similar, except that the stria is generally entire and the foveæ smaller, more punctiform and with still smaller area of punctuation, the punctures fine; elytra scarcely one-half longer than wide, of the usual form, fully one-half wider than the prothorax, the striæ more impressed suturally, the intervals there convex but flatter externally and at apex; discal puncture strong, at apical third; hind tarsi very slender, two-thirds as long as the tibiæ. Length (♀) 2.9–3.4 mm.; width 1.0–1.2 mm. New York (Lake Champlain and Catskill Mts.), also in Indiana. Five examples..... **occultus** n. sp.

9—Form elongate, moderately convex, blackish-piceous, the head, pro-

thorax and sides and suture of the elytra more or less irregularly pallescent; under surface of the prothorax blackish, gradually paler laterally, of the hind body piceous-black; legs pale; head two-thirds as wide as the prothorax, with distinctly larger though not more prominent eyes than in *rupestris;* antennæ notably slender and very moderately compressed, piceous, the first three joints paler; puncture at the centre of the vertex usually strong; prothorax rather transverse, fully a third wider than long, of the usual form, widest at apical third and with rounded sides, oblique and feebly arcuate posteriorly, the obtuse angles minutely prominent; stria distinct, subentire, the foveæ rather rounded, shallow and closely punctate; base narrower than the feebly sinuate apex; elytra long, more than one-half longer than wide, only two-fifths wider than the prothorax, with strong striæ and distinctly convex intervals, the discal puncture near three-fifths; hind tarsi with the first joint distinctly shorter than the next two combined, the fifth as long as the first two. Length (♂ ♀) 3.8–4.2 mm.; width 1.2–1.4 mm. New York and New Jersey, westward to Iowa. [*Acupalpus debilipes* Say; *Bradycellus parallelus* Chd.]..... **debilipes** Say

Form less elongate, the coloration nearly as in *debilipes* but usually not quite so dark, the elytra often broadly testaceous toward the sides and base, the suture always testaceous; under surface and legs similar in color; head nearly similar, the antennæ slender, dusky, the two basal joints paler, the third intermediate in color; prothorax similar but rather less transverse, with the base and apex more nearly equal and the foveæ more impressed and more coarsely punctate; elytra shorter, generally scarcely one-half longer than wide, relatively a little wider, the striæ and intervals similar; hind tarsi slightly more elongate. Length (♂ ♀) 3.6–4.0 mm.; width 1.2–1.5 mm. Rhode Island, New York and Virginia. [*Stenolophus cinctus* Say]. **cinctus** Say

10—Body in great part rather dark in coloration..... 11

Body notably pallid above, excepting an elytral blackish cloud, the head infumate in *purgatus*..... 12

11—Form and size nearly as in *debilipes* but not so dark in coloration, the pronotum always clear testaceous but of either paler or darker tint; under surface of the hind body, and usually the median part of the prosternum, piceous-black; epipleura and legs pale; head moderate, with prominent eyes; antennæ dusky, gradually paler basally, slender, nearly half as long as the body; vertex without an evident puncture; prothorax nearly as in *debilipes* but not so transverse, with more evenly rounded sides and with the base but little narrower than the apex, differing especially in having the obtuse basal angles simply not rounded and without the minutely prominent apices of the preceding species; elytra fully one-half longer than wide and nearly one-half wider than the prothorax, testaceous, with a large blackish cloud divided by the suture; hind tarsi slender, moderate in length, with the usual long fifth joint. Length (♂ ♀) 3.6–4.0 mm.; width 1.1–1.4 mm. Utah, Colorado and New Mexico. [*Geobænus congener* Lec.]..... **congener** Lec.

Form narrower than in *congener*, the size rather smaller, somewhat more convex, highly polished in lustre, dark testaceous, the head piceous except at base; prothorax not clouded; elytra black, rather broadly testaceous laterally and basally and with a fine, feebly rufescent suture; under surface, legs and epipleura as in *congener;* head similar, except that the antennæ are not quite so long, more slender and with evidently shorter joints; prothorax much shorter, more convex, less evenly rounded at the sides, widest near apical third, where the sides are rather strongly rounded, converging and feebly arcuate posteriorly to the angles, which are obtuse, clearly defined though not at all prominent; posterior fourth of the surface, between the foveæ, depressed below the general level, the foveæ deep but rather narrow, finely punctate; elytra nearly as in *congener* but shorter; anterior tarsi (♂) distinctly dilated, with joints 2–4 transverse, 1–4 with the usual long and pointed, narrowly separated, upwardly oblique, diverging and narrowly separated hyaline plates, two to each segment, in chevron formation, the plates feebly crumpled transversely and also with fine broken longitudinal strigilation; hind tarsi slender, of the usual structure. Length (♂) 3.75 mm.; width 1.02 mm. California (San Diego). A single example, taken by the writer.

aridus n. sp.

Form narrower, the size still smaller, rather more depressed, blackish-piceous, the base of the head and base, sides and suture of the elytra rufescent; under surface piceo-testaceous throughout, the legs and epipleura paler, yellow; head almost four-fifths as wide as the prothorax, with well developed and prominent eyes; antennæ dusky, pale basally, rather short and slender, extending but little behind the thoracic base; prothorax barely a fourth wider than long, widest near apical third, where the sides are rather strongly arcuate, thence converging, becoming almost straight to the obtuse basal angles, which are sharp and feebly prominent; base fully as wide as the truncate apex, wholly unmargined as usual; surface with rather strong sparse punctures in the vaguely but distinctly impressed latero-basal regions; anterior and posterior transverse impressions slightly evident; elytra one-half longer than wide, nearly one-half wider than the prothorax, the striæ fine, moderately strong; intervals flat laterally and apically, feebly convex suturally; side margins very finely reflexed as usual and with three or four erect setæ basally, the thoracic marginal seta, behind apical fourth, long and strong; hind tarsi very slender, three-fifths as long as the tibiæ. Length (♀) 3.0 mm.; width 1.05 mm. Arizona (Tuçson). A single example, taken by the writer. . . . . **decorus** n. sp.

12—Body elongate, moderately convex, shining, pale, the head infumate; elytra with a piceous cloud behind the middle and divided by the pale suture, the under surface of the hind body and median part of the prosternum blackish when mature; head as in *congener* but shorter and with a shorter neck, the antennæ similar but not so elongate, the joints shorter; prothorax similar and with obtuse, clearly marked though not in the least prominent, basal angles, but more evenly rounded at the sides and with the median parts of the base

smoother, without the longitudinal rugulæ generally evident in *congener*, the basal foveæ feebler; elytra much narrower, rather more than one-half longer than wide and only about a third wider than the prothorax, similarly striate and with moderately convex intervals. Length (♂) 3.75–4.0 mm.; width 1.2–1.25 mm. California (near San Diego),—Dunn. The hind tarsi in one example are much shorter than in the other, possibly from muscular contraction.

purgatus n. sp.

Body larger, broader and more convex, very shining, pale testaceous, the elytra with a feeble subposterior blackish cloud, divided by the suture, the under surface of the hind body pale piceo-rufous, the legs paler; head as pale as the prothorax and three-fourths as wide, with very prominent eyes; antennæ slender, dusky-testaceous, not one-half as long as the body; prothorax rather short, fully a third wider than long, of the usual anteriorly inflated form, the hind angles obtuse, with their apices sharply defined but not minutely prominent as a rule; base distinctly narrower than the apex; surface smooth, the foveæ moderate, feebly impressed and punctured as usual; elytra not quite one-half longer than wide, fully one-half wider than the prothorax, the striæ deep and sulciform and with convex intervals suturally, feebler laterally and apically; hind tarsi slender, only moderate in length. Length (♂ ♀) 3.8–4.8 mm.; width 1.35–1.9 mm. Arizona (Tuçson) to Texas (Austin and Waco), and northward to Nevada (Reno) and California (Truckee). Abundant. [*Bradycellus nubifer* Lec. and *B. ventralis* Lec.]. The larger measurements refer to a single remarkably developed individual.

nubifer Lec.

Body much smaller than in either of the preceding. 13

13—Form oblong-oval, moderately convex, pale rufo-testaceous above and beneath, excepting a small cloud on each elytron posteriorly; head nearly four-fifths as wide as the prothorax, the eyes very prominent, separated by three and one-half times their own width; antennæ dusky testaceous, paler basally, rather short; prothorax about a fourth wider than long, the sides rounded anteriorly, converging, becoming sensibly sinuate for some distance before the basal angles, which are acutely prominent and more nearly right than usual; surface broadly but scarcely visibly impressed and closely punctured throughout, though variably so, latero-basally; base very slightly narrower than the apex; elytra rather less than one-half longer than wide, two-fifths wider than the prothorax, broadly and circularly rounded behind, finely striate and with very feebly convex intervals throughout, the discal puncture at three-fifths. Length (♀) 3.2 mm.; width 1.15–1.2 mm. Colorado River at Yuma, California and Arizona. [*Bradycellus rivalis* Lec.]. . . . . **rivalis** Lec.

Form and coloration nearly similar throughout; head similarly large and well developed and with very prominent eyes that are separated by barely more than three times their own width; antennæ fuscous, paler basally, longer than in *rivalis*, being about half as long as the body; prothorax similar but relatively shorter, a third wider than long, the converging sides posteriorly straight to the very obtuse

basal angles, which are sharply defined but not or only extremely minutely prominent; base more arcuate than in the preceding and equal in width to the apex; surface similar, except that the basal punctures are sparser and more limited to feebly impressed foveæ, not extending to the sides as in *rivalis;* elytra similar throughout but a little more elongate, the intervals suturally somewhat more convex; hind tarsi a little longer. Length (♀) 3.25–3.3 mm.; width 1.2 mm. Island of Guadalupe, off the coast of Lower California. Two examples. . . . . **socors** n. sp.

14—Upper surface polished throughout (♂), the elytra densely microreticulate and alutaceous (♀). Body piceous-black in color, the elytral humeri and fine sutural stripe faintly rufescent; prothorax above and beneath sometimes faintly but uniformly pallescent; legs dark testaceous; head nearly three-fourths as wide as the prothorax, with large but only moderately convex eyes and slender fuscous, basally paler antennæ; prothorax relatively rather small, barely a fourth wider than long, the sides subevenly rounded, more converging and straighter basally, the angles very obtuse and somewhat blunt, though not broadly rounded; base slightly narrower than the apex; surface smooth, the stria distinct, subentire, the latero-basal area feebly impressed, closely, moderately strongly punctate; elytra rather more than one-half longer than wide and about one-half wider than the prothorax, parallel, with only very feebly arcuate sides and circularly rounded apex; striæ fine, with nearly flat intervals (♀), or deeper, with strongly convex intervals suturally (♂), the discal puncture at three-fifths (♂) or apical third (♀); hind tarsi rather short but slender. Length (♂♀) 3.7–4.3 mm.; width 1.2–1.45 mm. California (Siskiyou Co.),—Koebele. Eight examples. **alutaceus** n. sp.

Upper surface polished throughout and equally so in both sexes. 15

15—Upper surface intense and uniform black throughout, even the elytral suture devoid of any distinct evidence of paleness. Form rather slender, polished throughout, the under surface black; legs testaceous; head notably small, although nearly two-thirds as wide as the prothorax, the eyes very moderate and less prominent than usual; antennæ only moderately slender, almost half as long as the body, blackish, the two basal joints pale; prothorax a third wider than long, the converging sides basally broadly arcuate, the angles very obtuse, rather sharply defined but not at all prominent at their apices; base a little narrower than the sinuato-truncate apex; surface, when not perfectly mature, feebly pallescent at the apical and basal margins, smooth, with distinct stria, the latero-basal region broadly flattened or very feebly and vaguely impressed and with rather sparse uneven punctures, extending almost to the sides; elytra one-half longer than wide, not quite one-half wider than the prothorax, more oval than usual, the parallel sides distinctly arcuate; striæ fine, very moderately impressed, the intervals feebly convex suturally, flat externally and apically, the discal puncture behind three-fifths; hind tarsi three-fourths as long as the tibiæ. Length

(♂ ♀) 3.4–3.6 mm.; width 1.2–1.25 mm. California (Redwood Creek, Humboldt Co.). Two examples..... **lustrellus** n. sp.

Upper surface not uniform and deep black throughout.....16

16—Elytra black, with only the suture rufescent.....17

Elytra black with the suture and long humeral nubilous area rufescent.18

Elytra testaceous, each blackish toward but not across the suture....19

17—Body elongate, only moderately convex, shining, black, the prothorax more piceous-black as a rule and usually pallescent apically and basally, the sutural interval of the elytra rufescent; under surface piceous-black; legs pale flavo-testaceous to piceo-testaceous; head three-fourths as wide as the prothorax, the eyes only very moderate in size and slightly prominent; antennæ slender, dusky, the three basal joints pale: prothorax short and transverse, two-fifths wider than long, the sides strongly rounded anteriorly, oblique and nearly straight posteriorly, the angles obtuse but sharply marked, though the apices are scarcely at all prominent; base subequal in width to the apex; surface with a strong entire stria, generally feeble and sparsely punctulate anterior transverse impression and broadly flattened or feebly impressed, closely, strongly and very conspicuously punctured latero-basal areas, the punctures ascending along the sides to some extent; lateral part of the surface anteriorly with fine sparse punctulation, distinct in the type but obsolete in some individuals; elytra one-half longer than wide, but little more than a third wider than the prothorax, parallel, with feebly arcuate sides; striæ deeply impressed; intervals strongly convex suturally, less so externally and apically, the discal puncture at or behind two-thirds. Length (♂ ♀) 3.3–3.9 mm.; width 1.15–1.35 mm. California (San Francisco Bay and northward in the coast regions). Ten examples. **puncticollis** n. sp.

Body larger and broader than in the preceding, otherwise somewhat similar in general habitus, but with paler prothorax, black, shining, the elytra black, with pale suture when mature, sometimes mostly testaceous, the pronotum piceo-testaceous, clouded slightly with darker tint toward the sides; under surface black, the legs and epipleura piceo-testaceous; head nearly as in *puncticollis*, but more elongate, the antennæ slender but shorter, blackish, the two basal joints pallid; prothorax similar in its short transverse outline and form of the basal angles, but with the latero-basal area broadly, feebly impressed and very minutely punctate, the punctures not extending along the sides, the entire remainder of the surface impunctate, the stria fine, not attaining the apex; elytra broader, barely one-half longer than wide, one-half wider than the prothorax, similarly striate and with convex intervals. Length (♀) 3.7–4.0 mm.; width 1.35–1.4 mm. California (Truckee—6000 feet elevation, in the Sierras). Two specimens..... **montanus** n. sp.

Body much smaller than in either of the two preceding, shining, black, the pronotum pallescent apically and basally, the elytral suture pale; under surface black, with pale hypomera and epipleura, the legs very pale flavo-testaceous; head moderate, the eyes rather small but prominent; antennæ slender, rather more than half as long as the

body, dusky, the two basal joints rufous; prothorax less transverse, a third wider than long, the sides rounded anteriorly, converging and becoming feebly arcuate basally, the angles very obtuse, rather sharply defined though not prominent at their apices; base slightly narrower than the truncate apex; surface smooth, almost evenly convex, the stria fine, not entire, the latero-basal region barely at all impressed but with close-set, irregular, coarse and conspicuous punctures, which do not quite extend to the side margins; elytra only two-fifths longer than wide and two-fifths wider than the prothorax, the parallel sides distinctly arcuate; striæ rather deeply impressed, the intervals evidently convex; hind tarsi moderate. Length (♂) 3.2 mm.; width 1.22 mm. California (Hoopa Valley, Humboldt Co.)..... **discipulus** n. sp.

18—Form moderately stout and convex, shining, the head nearly deep black, the pronotum rufo-piceous to nearly black, paler at apex and base; elytra black, excepting along the suture and laterally toward the humeri; under surface piceous-black, the sides of the prosternum, epipleura and legs rufo-testaceous; head rather large, three-fourths as wide as the prothorax or more, the eyes unusually large, prominent; antennæ fuscous, the two basal joints paler, slender but not half as long as the body; prothorax unusually short and transverse, two-fifths to nearly one-half wider than long, the sides very moderately rounded, less so basally, the angles very obtuse and so blunt as to appear somewhat rounded; base very slightly narrower than the feebly sinuate apex; surface smooth, the stria fine, the anterior impression feebly evident, the posterior sometime rather strong though indefinite and feebly anteriorly angulate on the stria, the latero-basal region rather distinctly impressed and closely, rather strongly punctate, the punctures not or scarcely extending to the sides; elytra one-half longer than wide, not more than two-fifths wider than the prothorax, pallid along the external margin posteriorly, narrowly medially and again more broadly toward the humeri: striæ rather impressed, deeply and with more convex intervals suturally; hind tarsi rather long, very slender. Length (♂♀) 4.0–4.2 mm.; width 1.3–1.35 mm. California (Alameda Co. and Santa Rosa).
sejunctus n. sp.

19—Pronotal punctures extending over most of the basal, lateral and apical parts of the surface, nearly as in *puncticollis*, the body here however much narrower and more elongate. Shining, the pronotum clear and pale, the elytra darker, testaceous, the latter not clouded with black; under surface blackish, the prosternum, epipleura and legs pale testaceous; head moderate, somewhat dusky, the eyes moderately large, prominent; antennæ very slender though barely half as long as the body, fusco-testaceous, clearer basally; prothorax relatively rather small in size, fully a third wider than long, the sides broadly rounded, feebly converging posteriorly, becoming scarcely straight at the hind angles, which are very obtuse, with their apices finely acute and subprominent; base subequal to the truncate apex; surface with rather evident punctate anterior transverse impression, the posterior impression broad, giving a depressed

appearance to the basal regions, the latero-basal region scarcely at all impressed but with numerous close-set strong punctures, which extend finely and sparsely along the sides anteriorly; elytra three-fifths longer than wide, about one-half wider than the prothorax, parallel, with feebly arcuate sides; striæ well impressed, the intervals slightly convex, more distinctly suturad. Length (♀) 4.0 mm.; width 1.2 mm. California (Sacramento Co.),—Koebele. A single example..... **exstans** n. sp.

Pronotal punctures confined to the feebly impressed latero-basal region as usual..... 20

20—Body moderately stout and convex; surface shining, testaceous, the head piceous except basally, the pronotum mottled with piceous, especially along and at a distance from each side; elytra with an elongate blackish area parallel to the suture and frequently covering most of the upper part of the disk; under surface black, pale laterally and anteriorly, the legs pale; head large, three-fourths to four-fifths as wide as the prothorax, with rather prominent eyes; antennæ slender, half as long as the body; prothorax transverse, a third to two-fifths wider than long, moderately rounded at the sides anteriorly, the basal angles obtuse, sharply defined but seldom with trace of minute prominence at their apices; surface smooth, with fine median line, the foveæ rounded, shallow and rather strongly and closely punctate, the punctures not extending far from the foveæ; elytra one-half longer than wide, barely two-fifths wider than the prothorax, the striæ impressed and with moderately convex intervals. Length (♂ ♀) 3.5–4.3 mm.; width 1.2–1.4 mm. California (Sta. Cruz to Humboldt). Abundant..... **nubicollis** n. sp.

Body nearly as in *rupestris* but with very much less rounded sides of the prothorax and less prominent eyes; surface shining, pale testaceous, the vertex infumate; elytra each with an elongate blackish area; under surface of the hind body and middle of the prosternum black, the epipleura and legs very pale; head two-thirds as wide as the prothorax, the eyes large but not very prominent; antennæ half as long as the body, very slender, feebly fusco-testaceous, clearer basally; prothorax barely more than a fourth wider than long, the sides rounded anteriorly, converging and nearly straight throughout more than basal half, the basal angles obtuse, sharply defined but not at all prominent at their apices; base and apex subequal; surface with a strong entire stria, the foveæ large, somewhat impressed, strongly and closely punctate, separated from the sides by an unusually wide impunctate interval; elytra more than one-half longer than wide, two-fifths wider than the prothorax, the striæ moderately impressed, the intervals evidently but not strongly convex. Length (♂) 3.8 mm.; width 1.3 mm. California (Sta. Cruz Mts.).
lineatus n. sp.

21—Species of the Pacific coast faunal regions..... 22

Species of the Atlantic and Sonoran regions..... 25

22—Legs very pale, flavo-testaceous throughout..... 23

Legs piceous or dark rufo-piceous in color..... 24

23—Body moderately slender and convex, shining, black throughout

when mature, black beneath, paler along the sides of the prosternum and on the epipleura; head well developed, with moderate but very prominent eyes; antennæ rather thick, half as long as the body, fuscous, paler at base; prothorax a third wider than long, rounded at the sides anteriorly, the sides oblique and becoming straight posteriorly, evidently sinuate for a short distance before the angles, which though obtuse are therefore unusually prominent at their apices; base narrower than the apex; surface convex, smooth, with strong entire median line, the latero-basal region flattened and closely punctate; elytra barely one-half longer than wide, nearly one-half wider than the prothorax, the striæ more or less impressed, the intervals convex, feebly so externally and apically, rather strongly toward the suture; hind tarsi slender, nearly as usual. Length (♂ ♀) 2.6–2.8 mm.; width 0.85–1.0 mm. Coast regions from San Diego to Washington State. Very abundant. [*Stenolophus californicus* Lec.]..... **californicus** Lec.

Body nearly as in *californicus* but more slender and with relatively smaller prothorax, generally paler in color, rufo-piceous when mature; under surface as in *californicus* but somewhat paler in all its parts; head relatively still larger, being only very slightly narrower than the prothorax; antennæ notably more slender, piceous, paler basally; eyes prominent; prothorax relatively smaller than in *californicus*, fully a third wider than long, the sides more broadly and less strongly rounded anteriorly, the sinus before the basal angles still more pronounced than in *californicus*, the angles prominent but with their apices less acutely defined than in that species; the angles might be said to be only slightly more than right, the sides of the base oblique; surface throughout nearly similar; elytra more elongate, three-fifths longer than wide, nearly three-fifths wider than the prothorax, otherwise as in *californicus;* hind tarsi slender, three-fourths as long as the tibiæ. Length (♀) 2.2–2.8 mm.; width 0.8–0.95 mm. California (St. Helena, Sonoma Co.). Fort Ross, on the coast of the same county,—Mots. [*Acupalpus "symetricus"* Mots.]..... **symmetricus** Mots.

24—Form rather more elongate and more convex than in *californicus*, very shining and of the deepest black throughout, the sides beneath not paler; head moderate, the eyes smaller and less prominent than in *californicus*, the antennæ much more slender and more than half as long as the body, nearly black, dusky-testaceous at base; prothorax nearly as in *californicus* in outline and size but more convex, with the converging sides basally not sinuate for a sensible distance before the angles as they are in that species, the angles obtuse though with their apices strongly but minutely prominent; feeble latero-basal impressions finely, less closely and less extendedly punctate, the median stria very different, being short and broadly biabbreviated; elytra in form and proportion as in *californicus* but more convex, with finer, less impressed striæ and much less convex, in fact nearly flat, intervals, the discal puncture strong, at three-fifths; hind tarsi piceous, slender, moderate in length. Length (♀) 2.85 mm.; width 1.0 mm. California (Siskiyou Co.),—Koebele..... **ardelio** n. sp.

Form somewhat more elongate than in *californicus*, similarly shining and very moderately convex, deep black throughout, the sides of the prosternum, epipleura and legs blackish-piceous; head as in *californicus* but smaller, the neck sometimes faintly rufescent medially; eyes moderate and not very prominent; antennæ much more slender than in *californicus* but also shorter, less than half as long as the body; prothorax nearly as in *ardelio* in its outline basally and in the strongly though finely prominent basal angles, but much shorter and more transverse, more than two-fifths wider than long, the stria distinct and subentire, the foveæ feebly impressed and rather strongly, closely punctate, the punctures not extending far beyond the foveæ; elytra as in *californicus* in outline and striation but less exceeding the prothorax in width, the latter being actually much broader as well as more transverse than in that species. Length (♂ ♀) 2.2–2.9 mm.; width 0.8–1.05 mm. California (Lake Tahoe). Seven examples, taken by the writer..... **picipes** n. sp.

25—Head very much narrower than the prothorax; form narrow and elongate, moderately convex, shining, deep black throughout when mature but frequently with the prothorax and elytral suture pallescent; legs flavo-testaceous; head about two-thirds as wide as the prothorax, the eyes moderate in size and prominence; antennæ blackish, paler basally, more than half as long as the body and not very slender (♂), or somewhat shorter and more slender (♀); prothorax a third wider than long, the sides rounded anteriorly, converging and feebly arcuate basally, the basal angles obtuse, with their apices minutely and moderately prominent as a rule; base slightly narrower than the truncate apex; surface smooth, rather convex, the foveæ somewhat vague and feebly impressed, finely, rather closely punctate, the stria distinct, subentire; elytra one-half longer than wide to a little less, two-fifths wider than the prothorax, the striæ impressed; intervals distinctly convex suturally, flatter externally and apically; hind tarsi slender though unusually short. Length (♂ ♀) 2.4–2.7 mm.; width 0.75–0.9 mm. Rhode Island to Iowa and Texas. Very abundant. [*Acupalpus tantillus* and *difficilis* Dej.]..... **tantillus** Dej.

Head and general habitus very much as in *tantillus* but larger in size, also similar to *californicus* but larger and with relatively smaller anterior parts when compared with the elytra, shining, piceous-black, the elytral suture feebly rufescent, the legs pale; head moderate, the antennæ slender, not quite half as long as the body, rather dusky, clear testaceous basally; prothorax short, two-fifths wider than long, the sides rounded anteriorly, oblique and evidently sinuate toward the basal angles, which are right, rather prominent and sharply defined; base evidently narrower than the apex; stria distinct, subentire; foveæ shallow, finely, not conspicuously punctate; elytra three-fifths longer than wide, one-half wider than the prothorax, the striæ strong suturad; hind tarsi nearly three-fourths as long as the tibiæ, the basal joint as long as the next two and equal

to the fifth. Length (the sex undetermined) 2.9 mm.; width 1.2 mm. Utah (Provo),—Spalding; communicated by Mr. Knaus. **provoensis** n. sp.

Head large, only just visibly narrower than the prothorax; form less parallel, moderately convex, pale testaceous throughout, the elytra each with a small piceous cloud near the suture posteriorly, the under surface of the hind body partially variegated with piceous; head smooth, convex, the eyes notably large and very prominent; antennæ slender, fusco-testaceous, clearer basally; prothorax scarcely a third wider than long, the sides subevenly rounded, only a little less so posteriorly, the basal angles very obtuse, clearly defined and evidently prominent at their apices; base distinctly oblique at the sides and but little narrower than the truncate apex; surface smooth, the foveæ small, feeble, the punctures fine, not dense and covering but a small area, the stria distinct, subentire; elytra less than one-half longer than wide and more than one-half wider than the prothorax, the striæ feebly impressed, the intervals not very convex even suturally; discal puncture at two-thirds. Length (♀) 2.5 mm.; width 0.9 mm. Texas (El Paso). A single specimen, taken by the writer..... **larvatus** n. sp.

26—Body very small in size. Elongate, black, shining, head smooth, the frontal impressions oblique, deep; palpi pale; antennæ obscure, the two basal joints pallid; prothorax not shorter than wide, barely emarginate anteriorly, the base feebly rounded, slightly narrowed posteriorly, the sides moderately rounded, the hind angles feebly explanate, broadly rounded; transverse impressions indistinct, the stria deep, entire, the foveæ broad, rounded, not deep, confused with the explanate angles, obsoletely and sparsely punctate; elytra parallel, the apex rounded, not sinuate, deeply striate, the intervals feebly convex, the third unipunctate; scutellar stria wanting; legs rufo-testaceous, the posterior rufo-piceous, the femora more obscure. Length 3.0 mm.; width 1.25 mm. Island of Mackinaw. One specimen. [*Geobænus neglectus* Lec.]..... **neglectus** Lec.

Body much larger, more southern in habitat..... 27

27—Form moderately slender and convex, shining, clear testaceous in color, the head piceous, the elytra slightly obscure toward the suture, the latter pale; under surface of the hind body blackish-piceous, the epipleura and legs pale testaceous; head fully three-fourths as wide as the prothorax, the eyes moderate in size but very prominent; antennæ very slender, nearly half as long as the body, fusco-testaceous, gradually clearer basally; prothorax only just visibly wider than long, the sides broadly, almost evenly rounded, widest before the middle; base transverse medially, the angles very broadly rounded; apex feebly sinuate, but little wider than the base and with rather blunt angles; surface very evenly, moderately convex, the stria deep and entire, the foveæ rather small, rounded, feeble and with a few fine punctures; the foveæ are isolated and distinct and the basal angles are not deplanate; elytra rather more than one-half longer than wide, only two-fifths wider than the prothorax, parallel, with feebly arcuate sides and evenly rounded apex; striæ fine but

deeply impressed, the scutellar wholly wanting as usual; intervals feebly convex, more strongly suturad; hind tarsi slender, the first three joints decreasing uniformly and moderately in length, the fifth as long as the first two or 2–4 combined. Length (♀) 3.8 mm.; width 1.3 mm. Texas (Austin)..... **suavis** n. sp.

Form rather more parallel and less convex, shining, piceous-black, the prothorax and elytral suture generally slightly paler; under surface nearly black, the epipleura pale; legs piceo-testaceous; head three-fourths as wide as the prothorax, with large though only moderately prominent eyes; antennæ very slender, fully half as long as the body, blackish, paler basally; prothorax rather transverse, fully a third wider than long, the apex feebly sinuato-truncate, with obtuse but rather sharply defined angles and a little wider than the base; sides almost evenly rounded, a little more converging and less rounded posteriorly; base transverse medially, the angles very broadly rounded, not at all deplanate, the foveæ rounded, shallow, isolated and rather strongly and closely punctate; stria strong, entire; elytra rather more than one-half longer than wide but only a third wider than the prothorax, of the same form as in *suavis* and similarly striate; discal puncture at three-fifths; hind tarsi similar but with a slightly longer basal joint; male with the anterior tarsi distinctly dilated; joints 2–4 strongly transverse, triangular and broadly emarginate. Length (♂♀) 3.9–4.2 mm.; width 1.2–1.3 mm. Kansas (Sedgwick Co.) and Texas. Three examples..**festinans** n. sp.

The species from Sonoma, Cal., identified above as *symmetricus* Mots., agrees in every particular with the original description, including size of the body; the locality also is virtually identical. The large series of *tantillus* at hand, by reason of certain diversity of coloration, length of elytra, length and thickness of antennæ and other features, seems to indicate that there may be some distinct species or subspecies that are now confused, but further extended series from carefully recorded localities would be desirable before coming to any definite conclusion. I am unable to identify the male of *tantillus* from tarsal characters, the anterior tarsi being undilated in all the numerous examples examined, but the male may be relatively rare. *Larvatus* is allied to *rivalis* and is similar in its peculiar pallid coloration and very prominent eyes, but the size is very much smaller, the head relatively larger, the antennæ shorter and more slender and the sides of the prothorax not sinuate toward base as they are in *rivalis*. *Neglectus* is unknown to me and I have simply transcribed the original characters. *Bradycellus nigriceps* of LeConte may be a *Tachistodes* and allusion will be made to it under that genus.

T. L. Casey, Mem. Col. V, Oct. 1914.

The position of the following species is problematical, but for the present it may be attached to *Stenocellus*, although differing radically in the form of the prothorax:

Bradycellus subcordatus Chd.—Similar to *rupestris* but with different form of prothorax; eyes more prominent; prothorax slightly broader, the anterior angles not at all rounded at their tips; sides distinctly sinuate in posterior half and falling upon the base in a right angle; base very feebly bisinuate, more transverse near the angles; surface more distinctly punctured, especially in the lateral depressions; elytra slightly broader, very parallel, flatter, without trace of scutellar stria; color probably brown when mature. Length (♀) 4.75 mm.

The locality is not stated, but as the type was sent by Motschulsky, it is possibly a native of California; it is said by Chaudoir to be best placed near *tantillus*, but this cannot be accurate, as the size is very much greater. The peculiar conformation of the prothorax and size of the body, precludes association with any *Stenocellus* known to me at present.

Amerinus Csy.

The elongate parallel form of the body in this genus strongly recalls *Stenocellus*, but in the details of structure the two genera are only remotely connected. In *Amerinus* the emargination of the mentum is unusually small and shallow, the long sharply pointed tooth projecting even rather further than the angulate lobes; the middle of the base of the mentum is deeply impressed, the impression binary. The ligula is very slender and parallel to the tip and the paraglossæ do not extend quite to its apex, their outer angles divergently prolonged, these processes becoming very fine and curved. The labial palpi are quite different from those of *Stenocellus*, being slender, with the second joint slender, parallel and as long as the third. The second joint of the maxillary palpi is notably thickened, compressed and slightly arcuate. The inner lobe of the maxilla is extremely hooked at apex, the point prolonged far beyond the long coarse setæ forming the fringe; the last joint of the outer lobe is also very long, gradually drawn out apically into a long slender subulate point. The mandibles are long, prognathous, rather slender and feebly arcuate and the right at least, and possibly also the left, has a small acute tooth projecting from the inner side near the middle of the length. The eyes are rather small and

generally but feebly convex, the frontal foveæ long, outwardly curved and extending to the eyes and the third antennal joint is pubescent like the fourth, except near its base. The anterior tarsi of the male are moderately thickened but scarcely dilated and have beneath two rows of long slender squamiform papillæ, one in each series on each joint; the middle tarsi are slender and apparently unmodified. The scutellar stria is wanting, though the fovea is large and conspicuous. There are four setæ at the apex of the abdomen in both sexes.

Of this singular genus we seem to have three species as follows:

Elytra very long, nearly three times as long as the prothorax. Color piceous-black throughout, the legs pale testaceous; surface very shining; head rather small, elongate, three-fifths as wide as the prothorax, the eyes more convex than in the other species; antennæ long, very slender, pale testaceous throughout, fully half as long as the body; prothorax not quite as long as wide, widest at anterior two-fifths, where the sides are somewhat prominently rounded, thence broadly, feebly sinuate and feebly converging to the basal angles, which are right and very sharply defined; base rectilinear throughout and very slightly wider than the sinuato-truncate apex; surface very feebly convex, finely reflexed and diaphanous at the sides, the stria deep and strong, entire, the foveæ isolated, linear, extending for two-fifths but not quite attaining the basal margin, extremely deep and cavernous, the bottom slightly rugose; near the apex medially there are a few fine punctures; elytra three-fourths longer than wide, parallel, with feebly arcuate sides and abruptly very obtuse apex, two-fifths wider than the prothorax, the sinus broad and feeble but evident; striæ deep, subpunctate, the intervals convex; discal puncture small, near two-thirds; lateral line of foveæ very widely interrupted; hind tarsi slender, three-fourths as long as the tibiæ, the first joint subequal to the next two combined, much shorter than the fifth. Length (♀) 4.5 mm.; width 1.3 mm. Mississippi (Vicksburg)..... **longipennis** n. sp.

Elytra less, the prothorax more, elongate; eyes less convex..... 2

2—Body slender, feebly convex, shining, rufo-piceous in color, paler beneath, the legs flavo-testaceous; head two-thirds as wide as the prothorax, smooth as usual; neck rather long, parallel; antennæ pale testaceous throughout, slender, nearly three-fifths as long as the body; prothorax distinctly longer than wide, this a little less marked (♂), the sides very broadly rounded, gradually slightly converging and broadly, feebly sinuate basally, the angles right and sharply defined; base feebly sinuato-truncate, distinctly narrower than the apex, which is distinctly sinuato-truncate; surface with very deep coarse and sulciform entire median groove, the foveæ very deep, abrupt, elongate-linear, a third the total length and attaining the basal margin, though more shallowly, the bottom rugosely punctate

but shining; obsolete anterior impression with a few punctures; elytra three-fifths longer than wide, two and two-fifths times as long as the prothorax and nearly one-half wider, obtuse at apex, with very feeble sinus; sides subparallel and feebly arcuate, the disk rather wider near the apex than at base; striæ not or scarcely subpunctate, moderately impressed, the intervals rather feebly convex; dorsal puncture behind two-thirds; hind tarsi nearly as in the preceding. Length (♂ ♀) 4.0–4.2 mm.; width 1.2–1.25 mm. District of Columbia,—Ulke. Four examples. [*Bradycellus linearis* Lec.]. **linearis** Lec.

Body somewhat less slender, shining, piceous-black, the pronotum at apex and base and the elytral suture pallescent; under surface nearly black, the epipleura and legs testaceous; head nearly as in the preceding but with dark piceous antennæ, the two basal joints testaceous; prothorax but just visibly longer than wide, widest at two-fifths from the apex, the sides more strongly rounded than in *linearis* and more deeply sinuate posteriorly, the hind angles right and sharp; base rectilinear and as wide as the truncate apex; surface as in *linearis*, the very deep basal foveæ more obliquely prolonged to the basal margin; elytra two-thirds longer than wide, two and one-half times as long as the prothorax and two-fifths wider, nearly as in *linearis* throughout, except that the striæ are subpunctate, the intervals rather more convex and the sinus stronger and more oblique; the discal puncture is less posterior and at about three-fifths from the base; hind tarsi nearly as in the other species. Length (♂) 4.3 mm.: width 1.3 mm. Virginia (Fort Monroe). A single specimen. . . . . **fuscicornis** n. sp.

In all the species the side-pieces of the prosternum are strongly though not very densely punctured throughout the width anteriorly but not basally. *Fuscicornis* resembles *linearis* but is somewhat larger, with less elongate and laterally more sigmoid prothorax and darker coloration and differs especially in the coloration of the antennæ; the type is assumed to be a male, although the only trace of inferior squamulation visible on the anterior tarsi consists of about two long slender and coarsely hair-like squamæ on the fourth joint. The sexual modifications of the tarsi are rather more feeble in this genus than in any other of the Bradycellid genera known to me at present.

Philodes Lec.

The edentate mentum characterizing this and all the subsequent genera of the Acupalpini, here pertains very appropriately to a genus resembling *Amerinus* in outward appearance, being slender, even more depressed and with basally sinuate sides and sharp right

basal angles of the prothorax. The genus is however very peculiar in having three series of setigerous elytral punctures, exactly as in the Selenophorini. The mental emargination is very evenly, circularly sinuate, the ligula very slender, detached from the paraglossæ, which are of a form completely unlike that seen in *Amerinus*, they being elongate, parallel, concave throughout their length and with their apices evenly rounded. The labial palpi are only moderately slender, the second joint somewhat compressed and shorter than the third, the apex of which is rather rapidly and finely subulate. The inner lobe of the maxilla is moderately hooked at tip and the last joint of the outer lobe very gradually acuminate. The only properly glabrous antennal joint is the first, the second to fourth are successively more closely pubescent. The mandibles are rather short as usual, the eyes somewhat small and feebly convex and the frontal foveæ are oblique and linear, but do not quite attain the eyes. The neck is rather long and gradually narrowed basally. The scutellar stria is well developed and the lateral line of foveæ only very imperfectly interrupted medially. The anterior tarsi of the male are rather strongly dilated, the joints short, transverse, sharply angulate and with a long stiff seta at each side and have beneath joints 1–4 two long and rather narrow, irregular, hyaline squamules, semi-erect in position among numerous long hairs; the middle tarsi are not at all modified. The single known species is the following:

Body elongate, slender, very depressed, the upper surface nearly flat, shining, testaceous, the head and the elytra, excepting the sides and suture, infumate; under surface of the hind body somewhat piceous, the legs pale flavo-testaceous; head smooth, with unusually elongate neck behind the notably small and feebly convex eyes, large, nearly four-fifths as wide as the prothorax, the antennæ rather obscure testaceous, gradually clearer basally, unusually long and thick, nearly two-thirds as long as the body; prothorax not quite as long as wide, strongly rounded at the sides, the latter becoming rather abruptly deeply sinuate and thence parallel to the base in about basal fifth, the angles right and very sharply defined; base transverse, much narrower than the sinuato-truncate apex; surface very feebly convex, smooth, the stria fine but broadly impressed, entire and distinct; foveæ narrow, linear and rather deeply impressed in basal third, not attaining the base, impunctate; elytra nearly one-half longer than wide and two-fifths wider than the prothorax, the sides subparallel and broadly arcuate, the apex rapidly very obtuse, the sinus obsolete; striæ rather fine and feebly impressed, the

intervals feebly convex; hind tarsi slender, fully two-thirds as long as the tibiæ, the first joint rather longer than the next two combined but not quite as long as the fifth. Length (♂) 3.3 mm.; width 1.0 mm. Indiana,—Levette. [*Badister* and subsequently *Æpus testaceus* Lec., a name afterwaid changed to *Philodes alternans* because of preoccupation.]..... **testaceus** Lec.

The form of the prothorax reproduces very nearly that of the genus *Anthracus* Mots., but the chief peculiarities of the species are the triple elytral series of setigerous punctures and the long and conspicuously heavy antennæ; it seems to be but seldom taken and may actually be rare.

Goniolophus n. gen.

The limited number of small species forming this genus are evidently related to *Philodes* and *Anthracus* by the form of the prothorax, but differ from the former in having only a single series of fewer punctures on each elytron; in *Anthracus* there is only the usual single discal puncture. The emargination of the mentum is as in *Philodes*, but the labial palpi have the second joint about as long as the third, the latter more gradually and less finely acuminate apically. The ligula is very narrow, parallel and the paraglossæ are unattached for a considerable distance from its apex; they are elongate and obtuse at tip, nearly as in *Philodes* and extend well beyond the tip of the ligula, which has the usual two very long setæ; the inner lobe of the maxilla is broadly arcuate and much extended at apex, the inner fringe subspinuliform, the last joint of the outer lobe very long, gradually and moderately inflated basally, thence drawn out and very slender for more than half the entire length distally. The neck is short, the eyes large and very prominent, the frontal foveæ oblique but not attaining the eyes and the mandibles are short, in large part concealed in repose. The antennæ are slender, the first two joints virtually glabrous, the third pubescent nearly like the fourth. The scutellar stria is long and strong and the lateral line of foveæ is distinctly interrupted medially. The anterior tarsi in the male are nearly as in *Philodes*, but rather less strongly dilated, the laterally obliquely angulate joints 1–4 each having two larger, very long, somewhat transversely crumpled, internally serrulate, hyaline plates, which are obliquely semi-erect; the fifth joint is as long as the preceding three

combined; the middle tarsi are slender and completely unmodified. The surface of the body is much less depressed than in *Philodes* and even somewhat more convex, as a rule, than in *Anthracus*.

Of the three described species I have only one, *rectangulus* Chd., but have tried to interpolate the others in the following table by means of the published descriptions; the generic characters outlined above are from *lucens*, described below and to be regarded as the type of the genus:

Elytral series composed of three punctures.....2
Elytral series composed of four or five punctures.....3
2—Form elongate, rather depressed; head blackish; prothorax pale, with a large quadrate dusky spot; anterior transverse impression deeply marked; foveæ broad, rugosely punctured; elytra pale, with a broad dorsal vitta divided by the suture and abbreviated at each end. Length "4 mm." Georgia. One specimen. [*Stenolophus flavilimbus* Lec.].....**flavilimbus** Lec.
Form elongate-oblong, less depressed, the size smaller, the basal thoracic impressions deeper, feebly punctured, the sides less sinuate posteriorly than in *rectangulus* and the hind angles less prominent; color testaceous or rufo-piceous; legs, palpi and antennæ pale; prothorax broader than the head, nearly as long as wide, almost quadrate, slightly narrowed behind, the sides broadly rounded anteriorly; stria fine but distinct, the transverse impressions rather distinct; foveæ oblong, almost rounded, deep, somewhat rugosely punctulate at the bottom; hind angles nearly right but with their apices evidently blunt; base transverse, oblique at each side; elytra elongate, almost parallel, slightly convex, feebly sinuate; striæ distinct, the scutellar very evident; intervals almost flat. Length 3.3 mm.; width 1.3 mm. Sent by the elder LeConte and probably taken in Georgia. [*Acupalpus longulus* Dej.].....**longulus** Dej.
3—Body oblong, rather stout and convex, very shining, testaceous, the head, a very nubilous spot on each side of the median line of the pronotum and a very feeble nubilous cloud on each elytron toward the suture and largely behind the middle, piceous; under surface testaceous throughout, the hind body rather darker and more rufous; head nearly three-fourths as wide as the prothorax, the eyes moderately large, very prominent; antennæ rather slender, dusky, paler basally; prothorax just visibly wider than long, subquadrate, widest near apical third, the sides broadly, subevenly arcuate, becoming feebly sinuate toward base, the latter feebly arcuato-truncate, slightly wider than the feebly sinuate apex; basal angles very nearly right, sharply defined, not at all blunt, the apices not at all everted, the apical angles obtuse and blunt; surface moderately convex, without distinct trace of transverse impressions, the median line coarse, every deep and entire; foveæ large, elongate, moderately deep and strongly punctate, the punctures extending also over the flat deplanate area between the foveæ and the sides; side margins very

finely reflexed, the gutter lost at the deplanate latero-basal area; elytra two-fifths to one-half longer than wide, parallel, with feebly arcuate sides and very obtuse apex, two-fifths wider than the prothorax, the sinus short and barely visible; striæ deeply impressed, the scutellar long, parallel; intervals convex throughout; hind tarsi slender but short, three-fifths as long as the tibiæ, the first joint as long as the next two combined, not quite as long as the fifth. Length (♂♀) 3.5–3.7 mm.; width 1.2–1.45 mm. Texas (Galveston).

lucens n. sp.

Body more slender, only moderately convex, much smaller in size, shining, blackish-piceous, the pronotum clear dusky-testaceous throughout, sometimes blackish and gradually pallescent at the periphery; elytral suture very finely, the external margin more broadly, posteriorly, pallescent; legs, epipleura and prosternum pale; head only slightly narrower than the prothorax, with rather long neck and moderate, very prominent eyes; antennæ very slender, fully half as long as the body, fuscous, the two basal joints pale; prothorax transverse, a third to two-fifths wider than long, the sides rounded anteriorly, converging and evidently sinuate in about basal half, the hind angles right, very sharply marked and sometimes slightly prominent; base and apex equal in width; surface feebly convex, the stria fine but very distinct, entire, the anterior transverse impression visible but fine, rather close to the apex, the basal angles subdeplanate, flattened and punctulate, the foveæ oval, rather deep and obscurely punctate; elytra two-fifths longer than wide and fully one-half wider than the prothorax, wider behind than before the middle, very obtuse at apex, the apices rather abruptly, rectilinearly oblique but without sinus, striæ impressed, the scutellar long and strong, the intervals convex; hind tarsi as in *lucens*. Length (♂♀) 2.4–2.8 mm.; width 0.8–1.0 mm. Indiana to Mississippi (Vicksburg). Not rare. [*Acupalpus rectangulus* Chd.]..... **rectangulus** Chd.

The number of setigerous elytral punctures in *lucens* is rigorously four in all the eight series of the four individuals at hand. In *rectangulus* the number is more inconstant, some of the series having four and some five punctures.*

*Since the above matter relating to *Goniolophus* was put in print, I have received from Mr. Knaus two specimens, taken near New Orleans, La., of a species that answers very well to the description of *longulus* quoted in the table. The prothorax is less sinuate basally than in the others and the basal angles are more obtuse and blunt, the basal foveæ deep, oval and abrupt, with their bottoms closely punctulate. I unhesitatingly label them *longulus*, although there are plainly four foveæ in the substrial series, the three mentioned by LeConte being therefore doubtless due to an error of observation. The species is very different from *lucens*, being narrower and more elongate, with much shorter prothorax, having much deeper subbasal foveæ and more blunted basal angles.

Anthracus Mots.

As represented by *consputus* Duft., this essentially palæarctic genus bears a strong outward resemblance to *Philodes* and *Goniolophus*, having similar sinuously basally narrowed prothorax, with usually sharply defined, right or nearly right basal angles, but having only the single discal elytral puncture common to most of the genera of the Harpalinæ and not series of such punctures as in both the genera mentioned. The emargination of the mentum is very shallow and broadly, evenly sinuate throughout its width. The second labio-palpal joint is slightly compressed but elongate, though evidently shorter than the third and it bears two very long stout setæ; the third joint is rather slender, very gradually narrowed apically and not rapidly subuliform at apex as it is in *Bradycellus* for example. The last joint of the outer lobe of the maxilla is altogether different from that of the Bradycellids, being long and extremely slender from base to apex and with feeble even arcuation throughout. The hind tarsi are very slender and only moderate in length, the basal joint not as long as the next two combined. The anterior tarsi of the male cannot be described at present, as my examples are both females. The antennæ are long and slender, with the usual two glabrous joints of the subfamily. The elytral striæ are deep and the scutellar stria is well developed.

The following species is assigned to this genus without misgiving, although I have never seen it in actuality. It is evidently the descendant of a migrant from the palæarctic fauna by way of Siberia and Alaska, in recent geologic times, and forms additional evidence to prove the semi-Asiatic nature of the true Pacific coast fauna:

Form much elongated, depressed, shining, piceous, the prothorax and the elytra at margin and apex rufescent; prothorax subcordate, not shorter than wide, narrowed posteriorly, with the sides subsinuate; hind angles right; surface foveate basally at each side but only slightly punctate; elytra slightly wider than the prothorax, parallel and obliquely subsinuate at apex; striæ rather deep, the second unipunctate; base of the antennæ, palpi and legs testaceous. Length "4 mm." California (San Jose). One specimen. [*Stenolophus tener* Lec.].

tener Lec.

The general habitus of the body is said to resemble that of *Philodes testaceus*. I have seen no record of the original unique type having been duplicated by recent collectors.

Acupalpus Dej.

As represented by *trivialis*, the species here referred to the genus *Acupalpus*, which is very much more developed in the palæarctic than in the nearctic fauna, have the body very small in size, not much elongated and rather convex, with the elytra frequently wider behind the middle than at base and with the scutellar stria short or altogether wanting, except the persistent basal fovea. They form a group quite distinct from European species of the *meridianus* and *flavicollis* type, in the small size of the body, shorter antennæ, less rounded basal angles of the prothorax and in their uniformly dark colored elytra. In *trivialis* the emargination of the mentum is evenly parabolic in form, rather deep and the palpi are short, the second joint of the labial slightly compressed and shorter than the third, which is rapidly and acutely pointed at apex. The ligula is very slender, parallel and shorter than the paraglossæ, the latter narrow, rounded at tip and feebly concave. The inner lobe of the maxilla is slender and moderately arcuate distally and the last joint of the outer lobe is somewhat as in *Anthracus* in its very slender, gently arcuate form, but is not quite so long. The mandibles are thick, oblique, nearly straight externally and hooked slightly at tip. The anterior angles of the epistoma are sharp and abruptly projecting. The oblique frontal foveæ are finely prolonged to the eyes. The hind tarsi are slender, of very moderate length and the first and fifth joints are subequal, scarcely so long as the second and third combined. The anterior tarsi of the male are only very feebly dilated and have beneath two approximate series of very thin elongate subdecumbent hyaline squamæ, the middle tarsi slender and unmodified. The abdomen is finely, sparsely punctate medially, with four terminal setæ in the female and perfectly smooth, with two terminal setæ in the male. The five species in my collection may be known as follows:

Head very large, only slightly narrower than the prothorax in either sex. 2
Head smaller, much narrower than the prothorax. 3

2—Body very short and stout, subcuneiform, rather inflated posteriorly, shining, piceo-testaceous, the prothorax generally clearer; legs, antennæ and palpi testaceous; head smooth, the neck unusually long and fully as long as the eyes, which are much smaller and more feebly convex than usual; antennæ rather stout, as long as the elytra; prothorax fully two-fifths wider than long, the sides strongly rounded

anteriorly, strongly converging and nearly straight thence to the base in more than basal half; base feebly arcuate, much narrower than the broad sinuato-truncate apex; basal angles very obtuse, with their apices narrowly rounded; surface feebly impressed and with a few distinct punctures near the hind angles, the stria fine but strong, not quite entire; elytra but little more than a third longer than wide, very broadly obtuse and with vestigial sinus at apex, the sides distinctly arcuate, two-fifths wider than the prothorax; striæ very fine and superficial, the scutellar extremely short and feeble; intervals flat, the discal puncture behind two-thirds; lateral line of foveæ interrupted medially. Length (♂ ♀) 2.2–2.8 mm.; width 0.95–1.1 mm. Rhode Island. [*Stenolophus hydropicus* Lec.].

hydropicus Lec.

Body much more elongate, shining, rather convex, deep black, the prothorax dark rufo-testaceous; legs pale flavate; head but just visibly narrower than the prothorax, the neck rather long; eyes moderate, longer than the neck behind them and very prominent, very much larger than in *hydropicus;* antennæ more slender, distinctly shorter than the elytra, blackish, the basal joint pale; prothorax a third to nearly two-fifths wider than long, the sides more evenly rounded than in the preceding, though becoming gradually nearly straight posteriorly; base feebly arcuate, with very obtuse and narrowly rounded angles and but very little narrower than the sinuato-truncate apex; surface with fine, not very strong, subentire stria, the foveæ short, sublinear, broadly and moderately impressed and with a very few punctures, the surface thence to the sides, almost as far as the middle, deplanate; margins very finely reflexed; elytra much longer than in *hydropicus*, one-half longer than wide and one-half wider than the prothorax, only feebly inflated posteriorly, the sides broadly arcuate, the apex subcircularly obtuse, each apex straight and oblique; striæ very fine, the scutellar very short, oblique, rather distinct; intervals flat, perhaps just visibly opalescent in lustre; hind tarsi three-fourths as long as the tibiæ. Length (♂ ♀) 2.25–2.75 mm.; width 0.8–1.0 mm. Rhode Island (Boston Neck). A single pair.....**expertus** n. sp.

3—Form more slender than in *hydropicus* and still smaller in size, shining, piceous-black, the prothorax less black to obscure testaceous, the elytral suture also sometimes finely testaceous; legs pale; head two-thirds as wide as the prothorax, with moderate though prominent eyes, which are but little longer than the neck; antennæ slender, not quite as long as the elytra, fuscous, paler basally; prothorax widest near apical third, where the sides are strongly rounded, thence converging and straight to the obtuse but rather clearly defined and scarcely at all blunt basal angles; base barely narrower than the feebly sinuate apex; surface impressed and punctate near the hind angles, with distinct and subentire stria; elytra nearly one-half longer than wide, subparallel, barely at all inflated posteriorly, about a third wider than the prothorax, obtuse at apex, the striæ fine, impressed, the scutellar rather well developed; intervals feebly convex, not in the least opalescent. Length (♂ ♀) 2.3–2.5 mm.;

width 0.8–0.9 mm. Rhode Island to Lake Champlain and Iowa. Very abundant. [*Stenolophus carus* Lec.; ?*Trechus immunis* Kirby]. **carus** Lec.

Form much stouter but otherwise somewhat similar, very shining, piceous-black, the prothorax throughout testaceous; legs pale; head somewhat larger, three-fourths as wide as the prothorax, the eyes smaller but prominent and somewhat longer than the neck; antennæ obscure testaceous, only moderately slender, not quite as long as the elytra, the joints short as usual; prothorax as in *carus*, except that the converging sides are not so straight posteriorly and the obtuse basal angles evidently rounded; surface nearly similar but with the impressed part near the angles almost completely punctureless; elytra barely a third longer than wide, feebly inflated posteriorly, still more broadly obtuse at apex, the sides broadly arcuate, only a third wider than the prothorax; striæ fine, the scutellar very short and feeble; intervals nearly flat, the discal puncture near three-fifths; tarsi nearly similar. Length (♀) 2.6 mm.; width 1.0 mm. Rhode Island (Boston Neck). Two examples..... **nanellus** n. sp.

Form stouter than in *carus*, the size less minute; surface very moderately convex, very shining, deep black, the prothorax fusco-testaceous; legs pale; head still larger, though not so large as in *hydropicus* or *expertus*, nearly four-fifths as wide as the prothorax, the eyes moderately large and prominent; antennæ much more slender and with longer joints than in the two preceding, blackish, the first much, the second slightly, paler, half as long as the body; prothorax nearly as in the preceding, two-fifths wider than long, the sides rounded anteriorly, oblique and nearly straight basally, the basal angles obtuse and very narrowly rounded; depression near the hind angles with a few sparse punctures; elytra oblong, parallel, differing from any of the preceding in not being sensibly inflated posteriorly, the sides broadly arcuate, the apex broadly obtuse, with a short but distinct sinus; striæ fine, evidently though irregularly impressed as a rule, the scutellar not long but distinct; intervals feebly convex; tarsi fuscous, slender, of the usual structure. Length (♂♀) 2.4–2.8 mm.; width 0.85–1.0 mm. New York (Lake Champlain). **trivialis** n. sp.

It is possible, as suggested by LeConte, that *carus* may be the same as the *Trechus immunis* of Kirby, but there are evidences of other species besides those here described, more especially one, represented by two examples labeled "Ontario," which are a little larger in size and of more elongate form than the typical *carus* and this may be the true *immunis*. The species in the *carus* group are rather closely allied among themselves. In *hydropicus* the head is relatively not quite so wide as in *expertus*, but is very peculiar in its long neck and comparatively small and feebly convex eyes.

This species is also remarkably distinct in its very short and strongly, posteriorly inflated elytra.*

A single example of a South African species, which I took at Wellington, near Cape Town, much more closely resembles these American forms than it does the European species of the *meridianus* type; so I do not feel disposed to suggest a subgeneric name for our species, although they are so strikingly divergent in habitus from the normal forms of the genus.

Stenolophus Dej.

This is one of the largest genera of the Acupalpini and holds rather closely to a fixed type throughout all the American and such of the European species as I have had opportunity to examine. The head is usually moderate in size, the eyes well developed and rather prominent as a rule, the frontal foveæ deep and oblique, though generally not prolonged to the eyes and the antennæ are always rather long and slender, with the usual two glabrous basal joints of the subfamily. The mandibles are short and thick, their apices finely hooked and each has on the inner margin behind the middle a small and sometimes very acute tooth. The notch of the mentum is deep and evenly sinuate and the ligula is long, gradually somewhat expanded apically, the paraglossæ adherent about to its tip and with their outer angle prolonged into a process that frequently curls inward. The labial palpi are long, rather slender, with the second joint barely visibly shorter than the third and bearing three very long setæ, two near the middle of the anterior margin and one on the posterior side near the apex; the third joint is gradually and moderately acuminate; the last joint of the maxil-

* The measurements published by LeConte of *Acupalpus hydropicus* (3 mm.) and *Goniolophus rectangulus* (3–3.25 mm.), are plainly excessive and, as I have noted many other overdrawn measurements of the same kind, it seems certain that that author unconsciously fell into manipulative methods giving erroneous results. If the object to be measured be held above the scale, its projected image on the scale will cover more units of length than the actuality, in proportion to the distance between the scale and the object. In making these measurements care should be taken to place the scale close to the object and in such a way that both scale and object shall be at as nearly the same distance from the eye as possible, and as far away from the eye as the limits of distinct vision will permit. It seems a rather trivial point to allude to especially, but, as may be seen, results that do not depict the truth in nature are often recorded, which is always to be deplored in work supposed to be of permanent scientific value.

lary palpi is only one-half longer than the penultimate, the latter being unusually elongate. The last joint of the outer maxillary lobe is moderately long, feebly swollen basally, gradually finely subulate apically. The basal angles of the prothorax are always rounded and generally very broadly; the elytra have a single discal puncture; the lateral line of foveæ are widely interrupted and the scutellar stria is variable though usually long and well developed. The abdomen is punctureless and with two terminal setæ in the male, or punctured and with four setæ in the female as in *Acupalpus*. The anterior and middle tarsi in the males of some species, such as *fuliginosus* and *spretus* are both rather strongly dilated and biseriately squamose beneath, the fourth joint strongly bilobed, but in certain other species, such as *anceps*, the anterior are moderately dilated with two series of large elongate transversely plicate hyaline squamæ beneath, while the middle tarsi are slender and not or scarcely modified sexually. At first it seemed that these and some other differences might demand subgeneric division of the genus, but the general habitus of the body, as well as other structural elements, is so constant throughout, that it does not seem possible to divide the genus. Four subgeneric groups might be suggested, however, having as typical species *carbonarius*, *fuliginosus*, *unicolor* and *conjunctus*.

The species are numerous; those known to me may be described as follows:

Pronotum broadly and strongly deplanate or even somewhat reflexed in the vicinity of the hind angles, the latter very broadly rounded . . . 2

Pronotum not deplanate near the hind angles, which are never quite so broadly rounded 3

2—Form broadly oblong-suboval, rather depressed, deep black, shining, the elytra (♀) opaculate; legs blackish-piceous; head barely more than half as wide as the prothorax, the eyes rather large but not very prominent; antennæ blackish, with the first joint rufous, very long and slender; prothorax of peculiar form in the genus, not quite one-half wider than long, widest somewhat behind the middle, the sides very broadly and subevenly arcuate; apex rather deeply sinuate, narrower than the base, which is transverse medially, the angles extremely broadly rounded and wholly obliterated; surface finely reflexed at the sides at apex, the gutter flat, rather rapidly increasing in width posteriorly, disappearing in the broad latero-basal flat area, which, in common with the large rounded and rather deep foveæ, is very finely and sparsely punctulate and opaculate; stria very fine, not extending anteriorly beyond the obsolete transverse impression;

elytra almost one-half wider than the prothorax, large, parallel, with broadly arcuate sides and obtuse apex, nearly one-half longer than wide, the sinus very feeble though evident; striæ rather fine, coarse and deep at apex, the scutellar long; intervals very feebly convex, the discal puncture coarse, at four-sevenths; hind tarsi very long and slender, almost as long as the tibiæ, the first joint longer than the next two and one-half longer than the last; abdomen (♀) not punctate medially. Length (♀) 7.0 mm.; width 2.9 mm. A single example, without indication of locality but probably from the south Atlantic region. [*Harpalus carbonarius* Dej.]. I do not understand the reference of this species to Brullé by LeConte.... **carbonarius** Dej.

Form less broadly oblong-suboval and rather more convex, much more shining, black, the thoracic edges diaphanously paler, the elytra with feeble greenish lustre; legs pale piceo-testaceous; head larger, fully three-fifths as wide as the prothorax, with large and very prominent eyes; antennæ long and very slender, filiform, blackish, with paler basal joint; prothorax nearly one-half wider than long, parallel, widest at the middle, the sides broadly and evenly arcuate; apex moderately sinuate, slightly narrower than the base, the basal angles very broadly rounded and obliterated; surface finely but strongly reflexed at the sides anteriorly, the gutter deeply concave, gradually widening posteriorly, becoming, about the reflexed basal angles, a distinct concavity, which communicates with the rounded and deeply impressed foveæ, the punctulation of this region extremely fine, sparse and obsolescent; anterior and posterior transverse impressions very feeble though evident, the stria excessively fine; elytra not quite one-half longer than wide, a third wider than the prothorax, parallel, with feebly arcuate sides and obtusely ogival apex, the sinus obsolescent; striæ rather fine, the scutellar notably short; intervals flat; discal puncture very coarse, behind three-fifths; hind tarsi four-fifths as long as the tibiæ, the first joint equal to the next two and much longer than the fifth. Length (♂) 5.6–5.8 mm.; width 2.2 mm. Texas (Galveston). Two examples..... **spretus** Dej.

3—Species larger in size, seldom at all under 4 mm. in length.....4

Species very small in size, always well under 4 mm. in length, with very broadly rounded basal thoracic angles, the anterior and middle tarsi (♂) more or less unequally dilated and biserrately squamulose beneath; elytral striæ not coarser and deeper on the declivity, the intervals there not or scarcely more convex.....25

4—Eyes large or moderate in size; elytra similar in lustre in the sexes and more or less convex; elytral striæ coarse and approximate on the posterior declivity.....5

Eyes very small; elytra alutaceous in the female and almost flat, rather short and obliquely truncate; body very pale testaceous in color; discal puncture of the elytra more posterior in position than in any other species; striæ on the declivity not coarse or approximate, the intervals remaining flat throughout.....24

5—Scutellar stria more or less long and parallel.....6

Scutellar stria short and oblique, sometimes obsolete.....21

6—Color when mature black or piceous, the pronotum sometimes pale and with a large central piceous area.....7
Color testaceous, the pronotum always clear and uniform, the facies nearly as in *Agonoderus* but more depressed.....20
7—Species of the Atlantic and Sonoran regions, the pronotum always uniform in color and generally black when mature.....8
Species of the Pacific faunal regions to the westward of the Rocky Mountains.....11
8—Body notably slender in form.....9
Body stout and larger in size.....10
9—Color black, the thoracic edges diaphanously pale, the elytral suture and the sides nubilously pallescent; under surface blackish-piceous, the epipleura and legs pallid; head large, fully three-fourths as wide as the prothorax, with large and very prominent eyes, the foveæ finely produced almost to the latter; antennæ long, slender, blackish, the basal joint much, the second slightly, paler; prothorax barely a third wider than long, widest before the middle, the sides broadly, subevenly rounded, feebly converging basally, the apex feebly sinuate and as wide as the base, which is transverse medially, the angles broadly rounded; surface strongly but finely reflexed at the sides, equally from apex to base, the foveæ large, vague, extremely feebly impressed and with rather close-set fine punctures, the stria extremely fine, incomplete; elytra long, more than one-half longer than wide, two-fifths wider than the prothorax, parallel, with very feebly arcuate sides and obtuse apex, the sinus vestigial; striæ rather deeply impressed, deeper and coarser apically—a remarkable difference when compared with such species as *unicolor* and *conjunctus*, as well as the genus *Stenocellus;*—intervals broadly convex, very narrow apically: scutellar stria very long; discal puncture strong, at two-thirds; hind tarsi long and slender, the first and fifth joints equal in length; middle tarsi (♂) slender and filiform. Length (♂ ♀) 5.0–6.0 mm.; width 1.8–2.0 mm. Rhode Island to Florida, Kansas and western Texas (El Paso). Extremely abundant. [*Feronia ochropezus* Say; *S. convexicollis* Lec.; ?*S. gracilis* Csy. (Arizona)].

ochropezus Say

Color obscure testaceous, the head blackish, the pronotum piceous; under surface and legs dark rufous; head much smaller than in *ochropezus* and with less developed and less prominent eyes; antennæ slender, fusco-testaceous; prothorax shorter, two-fifths wider than long, widest slightly before the middle, the sides broadly, subevenly rounded; apex feebly sinuate and subequal to the base, the basal angles much less broadly rounded than in the preceding; surface more finely and feebly reflexed at the sides throughout the length, the foveæ less broad and more oblong, rather more impressed but with only five or six punctures, separated from the sides by a feeble smooth convexity; median stria very fine, feeble, incomplete; elytra uniformly fusco-testaceous in color, shorter than in the preceding and with much finer striæ, not one-half longer than wide and about a fourth wider than the prothorax, the apices obliquely subtruncate; striæ very fine, coarse and deep at apex, the scutellar rather long

but very fine and feeble; intervals flat or very nearly, very narrow at apex; discal puncture behind two-thirds; hind tarsi with the first and fifth joints subequal in length; anterior tarsi (♂) rather strongly dilated, the intermediate slender. Length (♂ ♀) 5.0–5.4 mm.; width 1.8–1.9 mm. Arizona (probably southern)... **abstinens** n. sp.

10—Form oblong-oval, moderately convex, shining, black, the edges of the pronotum diaphanously pale, the entire elytra pale piceo-testaceous; entire under surface piceous-black, the epipleura pale; legs pale, the femora in part and tip of the hind tibiæ sometimes blackish; head much smaller than in *ochropezus*, less than three-fifths as wide as the prothorax, the eyes large but only moderately prominent; antennæ long, very slender, black, the basal joint rufous, with a large black cloud, the second fusco-testaceous; prothorax fully a third wider than long, parallel, with very evenly and moderately rounded sides; apex distinctly sinuate, barely at all narrower than the base, which is transverse and not beaded medially, the basal angles very broadly rounded, their finely reflexed margin extending evenly to the apical angles, which are rather prominent and narrowly rounded; surface smooth, the stria fine, the foveæ large, rounded, rather deeply impressed and with a few small punctures at the bottom; elytra a little less than one-half longer than wide, a third wider than the prothorax, parallel, with feebly arcuate sides and obtuse apex, the sinus feeble but evident; striæ strong, somewhat impressed, the scutellar shorter than in *ochropezus;* intervals feebly convex, the discal puncture at two-thirds; hind tarsi long, the basal joint as long as the next two together and distinctly longer than the fifth; male with both anterior and middle tarsi rather strongly dilated. Length (♂ ♀) 5.6–6.8 mm.; width 1.9–2.5 mm. Rhode Island, New Jersey and Pennsylvania. Much less abundant than *ochropezus*. [*S. versicolor* Kirby; *S. fuscipennis* Lec.]..... **fuliginosus** Dej.

Form oblong-oval, moderately convex, shining, much larger in size than any other species, black, the edges of the pronotum diaphanously pale; elytra with a feeble greenish lustre, the sides nubilously pale, the suture pale posteriorly; under surface black, the epipleura piceo-testaceous, the legs pallid throughout; head moderate, two-thirds as wide as the prothorax, with large and very prominent eyes; antennæ very slender, black, the two basal joints wholly pale: prothorax two-fifths wider than long, widest somewhat before the middle, rather more narrowed basally than apically, the sides almost evenly rounded; apex rather feebly sinuate, with obtuse and rounded angles and about as wide as the base, which is transverse, unbeaded throughout and with broadly rounded angles; surface rather finely reflexed at the sides throughout the length, flattened and densely punctured latero-basally, continuously with the foveæ and to the side margins, the foveæ thus obliterated and forming part of the rather abrupt flattening; stria very fine; elytra nearly three-fifths longer than wide and two-fifths wider than the prothorax, parallel, the apex obtusely ogival, the sinus broad and very feeble though evident; striæ strong, the scutellar very long; intervals feebly convex, very narrow and convex

on the declivity; discal puncture behind two-thirds; hind tarsi long and slender, proportionally rather shorter than in *fuliginosus*, though nearly similar in structure, three-fourths as long as the tibiæ; male with the anterior tarsi distinctly dilated, the intermediate slender. Length (♂ ♀) 7.4–7.9 mm.; width 2.75–2.8 mm. California (San Diego). Four examples, very uniform in every way. **flavipes** Lec.

11—Pronotum uniformly black throughout, only the very fine edges diaphanously pallescent. 12

Pronotum more or less broadly and nubilously pale at apex and base and generally more narrowly at the sides; hind angles of the prothorax less rounded than in any other species of the genus. 17

12—Head well developed, about three-fourths as wide as the prothorax, with notably prominent eyes. 13

Head relatively smaller, three-fifths to two-thirds as wide as the prothorax, with the eyes much less prominent. 16

13—Elytra deep black or with the suture alone paler. 14

Elytra obscure brown in color. 15

14—Form rather slender, moderately convex, shining, very deep black throughout above and beneath, the suture not paler; outer edge of the epipleura pale; legs varicolored, the femora black, pallescent at base, the tibiæ testaceous, black apically, the tarsi deep black; head smooth, the eyes prominent; antennæ slender, black, the basal joint pale, with a blackish cloud; prothorax a third wider than long, the sides parallel, evenly and broadly rounded; apex feebly sinuate, with distinct angles and as wide as the base, which is feebly arcuate, with broadly rounded angles; surface with a very fine, barely pallescent reflexed margin, which is continued about the basal angles to lateral fourth of the base, the foveæ isolated, rounded, extremely feeble and with a very few punctures; median stria excessively fine and feeble; elytra three-fifths longer than wide and not quite a third wider than the prothorax, parallel, with broadly arcuate sides and obtuse apex, the sinus very feeble; striæ very fine, coarse and deep at apex, the scutellar long but fine; intervals virtually flat, the discal puncture behind two-thirds; hind tarsi slender, the first joint not quite as long as the next two and somewhat longer than the fifth; male with both the anterior and middle tarsi distinctly and subequally dilated. Length (♂) 5.0 mm.; width 1.9 mm. California (southern). . . . . **remissus** n. sp.

Form stouter, shining, deep black above and beneath, the very fine reflexed margins of the pronotum and elytra and the entire suture of the latter finely rufescent; legs as in the preceding—substituting piceous for black,—the femora rather pale, dark apically, the tarsi nearly black; head very well developed, with prominent eyes; antennæ slender, blackish, the two basal joints pale; prothorax widest somewhat before the middle, the sides more feebly arcuate than in the preceding and only feebly so basally; apex still more feebly sinuate and with more obtuse and blunt angles, fully as wide as the base, which is feebly arcuate, with broadly rounded angles; surface very finely reflexed at the sides, a little more strongly so at the basal

angles, the bead disappearing at outer fifth or sixth of the base; foveæ isolated but excessively feeble and vague, barely traceable and usually not distinctly punctate, sometimes with a very few fine punctures basally; stria excessively fine; elytra relatively broader, one-half longer than wide and more than two-fifths wider than the prothorax, parallel, with feebly arcuate sides and obtuse apex; striæ nearly as in *remissus*, the scutellar much shorter, the discal puncture near three-fourths; hind tarsi with the first joint scarcely as long as the fifth; male with the anterior tarsi very moderately dilated, the intermediate slender. Length (♂ ♀) 4.8–5.7 mm.; width 1.8–2.0 mm. California (Humboldt Co.) to Vancouver Island and Nevada (Reno). Abundant..... **fidelis** n. sp.

15—Body moderately slender and convex, very shining, black, the elytra dark brown; under surface black, the entire epipleura pale testaceous; legs and tarsi black, the femora paler at base, the tibiæ pale, black apically; head well developed, the eyes only moderate in size and prominence; antennæ rather stout, not so long as usual, black, the two basal joints in part pale; prothorax short, more than two-fifths wider than long, parallel, with very evenly and moderately rounded sides; apex distinctly sinuate, with rather sharp angles, barely at all narrower than the base, the basal angles broadly rounded; surface smooth, very finely reflexed at the sides, the bead extending to outer fourth of the base, not at all stronger at the angles; foveæ isolated but extremely feeble and vague and with a few distinct punctures, the stria very fine; elytra one-half longer than wide and two-fifths wider than the prothorax, parallel, with obtuse apex, the sinus very feeble; striæ fine except at apex, the scutellar very fine, only moderate in length; intervals nearly flat; first joint of the hind tarsi somewhat longer than the fifth; male with the anterior tarsi feebly dilated, the intermediate slender. Length (♂ ♀) 4.0–5.2 mm.; width 1.6–2.0 mm. California (Truckee, 6000 feet). Rather abundant..... **incultus** n. sp.

Body nearly similar but larger and stouter, shining, black, the elytra obscure brown with a large indefinite blackish cloud, just visibly opalescent, the suture finely rufescent posteriorly; under surface, epipleura and legs as in the preceding; head well developed, the eyes larger and more prominent than in the preceding; antennæ longer and rather more slender, black, the two basal joints partially paler; prothorax as in *incultus* but much shorter and broader, nearly one-half wider than long, the sides parallel but more strongly rounded, the apical angles blunter and the feeble vague basal impressions with less numerous but distinct punctures, very few in number; elytra nearly three-fifths longer than wide, a third wider than the prothorax, less obtuse at apex than in *incultus*, the oblique sinus almost obsolete; striæ extremely fine, much finer than in the preceding, as usual coarse at apex, the scutellar longer but very fine; intervals perfectly flat, the discal puncture near apical fourth; first joint of the hind tarsi equal in length to the fifth; male with both the anterior and intermediate tarsi rather strongly, or at least distinctly, dilated. Length

(♂) 6.0 mm.; width 2.2 mm. California (Gualala River, Mendocino Co.).....**consors** n. sp.

16—Form stout, very moderately convex, strongly shining, deep black throughout above and beneath, the minute reflexed thoracic margins and the epipleura alone pallescent; legs varicolored as in the preceding two species; head scarcely three-fifths as wide as the prothorax, with large but only very moderately convex eyes; antennæ moderately slender, the joints not very elongate, the basal pale; prothorax two-fifths wider than long, parallel, the sides evenly and rather strongly arcuate; apex feebly sinuate, with bluntly rounded angles and barely visibly narrower than the base, which is feebly arcuato-truncate, with broadly rounded angles; surface throughout nearly as in the two preceding, the very feeble vague foveæ with a few rather distinct punctures; elytra nearly one-half longer than wide and two-fifths wider than the prothorax, obtuse at apex, with very feeble sinus; striæ very fine, the surface throughout nearly as in *consors* but with the suture not in the least paler; basal joint of the hind tarsi sensibly longer than the fifth; abdomen medially toward apex with very fine sparse and minutely pubiferous punctures as usual in the female. Length (♀) 5.7 mm.; width 2.22 mm. California (Lake Tahoe). A single specimen, taken by the writer...**debiliceps** n. sp.

17—Form stout, the general coloration darker.....18

Form rather slender, the general coloration less dark, more piceous...19

18—Body oblong-suboval, moderately convex, shining, black, with decided greenish lustre throughout above, all the margins of the pronotum and the reflexed margin of the elytra narrowly but very distinctly pale, the suture seldom at all pallescent; under surface black, the epipleura and the legs in great part pale, the femora infumate except basally, the tibiæ blackish at apex and the tarsi black, the anterior (♂) piceous; head well developed, with prominent eyes and long slender black antennæ, the basal joint pale; prothorax rather more than two-fifths wider than long, parallel, the sides subevenly, moderately rounded; apex evidently sinuate, slightly narrower than the feebly arcuate base, the basal angles slightly more than right and narrowly rounded, much more distinct than in any of the preceding species; surface finely but rather strongly, evenly reflexed at the sides, the transverse impressions somewhat evident medially, the stria very fine; foveæ large, isolated, feebly impressed, sublinear and within a rather large area of fine moderately close-set punctures; elytra one-half longer than wide to a little more, two-fifths wider than the prothorax, parallel, with broadly arcuate sides and very obtusely ogival apex, the sinus long and very feeble; striæ fine except at apex, the scutellar long, the intervals nearly flat; hind tarsi four-fifths as long as the tibiæ, the basal joint about as long as the next two and very little longer than the fifth; male with the anterior tarsi strongly, the intermediate much less though distinctly dilated. Length (♂♀) 4.4–6.9 mm.; width 2.0–2.7 mm. San Diego to Clackamas Co., Oregon; also a single specimen from Provo, Utah, taken by Mr. Spalding and sent to me by Mr. Knaus. Very abundant. A form taken at Reno, Nevada, differs only in having the prothorax more narrowed

anteriorly and more extensively punctulate at base, with obsolescent foveæ. [*S. indistinctus* Mots.]..... **limbalis** Lec.

Body somewhat similar but shorter and relatively broader, piceous-black, with greenish lustre, the periphery of the pronotum more broadly pallid, the reflexed margins of the elytra pale, the suture pallescent; under surface and pale epipleura nearly similar, the legs similarly variegated but, on the whole, of paler coloration; head and antennæ nearly similar; prothorax very much shorter and more transverse, fully one-half wider than long, the outline and surface nearly similar, except that the apex is only very feebly sinuate and the very feeble vague basal foveæ more diffuse and not linear; elytra very much shorter, two-fifths longer than wide, otherwise similar, except that the scutellar stria is less elongate; hind tarsi longer, being about as long as the tibiæ, slender, the anterior tarsi of the male nearly similar. Length (♂♀) 6.3–6.8 mm.; width 2.4–2.5 mm. Oregon, without further indication of locality. Two examples. **longitarsis** n. sp.

19—Form elongate-suboval, rather convex, shining, piceous, the head deep black; prothorax above and beneath pale, with the central parts of the pronotum often nubilously piceous; elytra with the lateral margin rather broadly and the suture rufous; under surface of the hind body black, the epipleura and legs very pale throughout; head smooth, nearly three-fourths as wide as the prothorax, with large and prominent eyes; antennæ not very long or slender, blackish, the basal joint pale; prothorax two-fifths wider than long, widest before the middle, the sides rounded, rather less so basally; apex very feebly sinuate, equal in width to the base, the basal angles moderately rounded though more broadly than in the two preceding; surface finely and moderately reflexed at the sides, the foveæ isolated, broad, so extremely feeble as to be scarcely traceable and having very few small punctures, which are frequently obsolete, the stria extremely fine and feeble as a rule; elytra rather more than one-half longer than wide, parallel, with feebly arcuate sides and rather abruptly very obtuse apex, one-half wider than the prothorax, the sinus very feeble or vestigial; striæ fine, the scutellar moderately long; intervals nearly flat to feebly convex; hind tarsi very slender, the basal joint longer than in the two preceding and somewhat longer than the fifth; male with the anterior tarsi moderately dilated, the intermediate slender. Length (♂♀) 4.7–5.7 mm.; width 1.8–2.0 mm. California (coast regions from Monterey to Humboldt). [*S. rotundicollis* Mots.]..... **anceps** Lec.

Form and facies somewhat as in *anceps* but, on the whole, with still paler coloration and of slightly larger size and less slender form; head similar, deep black; antennæ slightly more elongate; prothorax similar but with much less strongly and more evenly rounded sides, which are scarcely less arcuate posteriorly than before the middle, the foveæ obsolete and completely impunctate; elytra relatively broader, barely one-half longer than wide, three times as long as the prothorax and about two-fifths wider; outline nearly as in *anceps*, the color so uniformly pallid that the greater paleness of the side margins and

suture is seldom apparent; striæ fine, coarse and close as usual at apex, the scutellar rather long; intervals flat or very feebly convex, the discal puncture rather before apical fourth; hind tarsi and male sexual characters nearly as in *anceps*. Length (♂ ♀) 5.0–5.8 mm.; width 1.9–2.2 mm. Utah (Provo). Seven examples.

peregrinus n. sp.

Form and size nearly as in *dissimilis* but of different color and with the thoracic foveæ less marked, shining, nigro-piceous; prothorax slightly shorter than wide, narrowed posteriorly, with the sides rounded; all the angles rounded, the entire periphery testaceous; surface rugose at base, punctulate latero-basally but scarcely foveate; elytra shining, cyanescent, the lateral limb testaceous; striæ deep, posteriorly excavated, the second unipunctate; middle of the sterna, legs, mouth-parts and antennæ flavo-testaceous, the antennæ fuscous distally; male with the anterior tarsi broadly, the intermediate slightly, dilated. Length 6.2 mm. Colorado River, near the Gila. A single male.....**cincticollis** Lec.

20—Form oblong, very moderately convex, shining, rufous, the head black; pronotum clear rufous, the elytra similar in color, but with a large elongate black spot on the suture, the latter not pale or but very feebly pallescent; under surface and legs clear rufous, the metasternum and its parapleura nigrescent; head well developed, three-fourths as wide as the prothorax, the eyes very prominent; antennæ long, very slender and filiform, dark brown, the two basal joints pale; prothorax a third wider than long, widest before the middle, the sides rounded, rather less so basally; apex feebly sinuate, with obtuse angles and fully as wide as the base or somewhat wider, the base transverse medially, with very broadly rounded angles; surface unusually finely, evenly reflexed at the sides, the foveæ isolated, rounded, extremely feeble and with numerous distinct punctures, finely extending to the sides as a rule; stria very fine; elytra one-half longer than wide, a third wider than the prothorax, parallel, with feebly arcuate sides and evenly, subcircularly rounded apex, the sinus obsolete or barely traceable; striæ strong, impressed, the scutellar moderately long, parallel; intervals evidently convex, the discal puncture just before apical fourth; hind tarsi shorter than usual, two-thirds as long as the tibiæ, the first joint not as long as the fifth; male with the anterior tarsi feebly dilated, the intermediate very slender. Length (♂ ♀) 4.8–6.0 mm.; width 1.8–2.2 mm. Mississippi, Louisiana and Texas (Austin). Abundant.....**dissimilis** Dej.

Form oblong, feebly convex, larger and stouter than the preceding, with relatively smaller head, the coloration nearly similar throughout, the metasternum less dark, the elytral black area more nearly attaining the base and with a very feeble opalescent lustre, the suture finely rufescent; head black, pallescent at apex, three-fifths as wide as the prothorax, the mandibles pale, black at tip; eyes similar; antennæ slender and filiform, feebly fusco-testaceous, clearer basally; prothorax as in *dissimilis* but more transverse, two-fifths wider than long, the sides rather more strongly rounded, the basal angles scarcely so broadly as in that species; apex similarly very feebly

sinuate, with obtusely rounded angles, more exactly equal in width to the base; surface similar, except that the latero-basal area, involving the extremely feeble foveæ, is subdeplanate and finely, very feebly, rather irregularly punctulate throughout; elytra larger, fully one-half longer than wide, two-fifths wider than the prothorax, parallel, the apex not so circularly rounded but more obtuse and bioblique, the sinus obsolete; striæ rather less coarse, the scutellar longer, the intervals less convex; hind tarsi longer, the first and fifth joints equal in length; male with the anterior tarsi rather strongly, the intermediate feebly, dilated, the latter much less slender than in the preceding. Length (♂ ♀) 6.5–6.8 mm.; width 2.5–2.65 mm. Texas (El Paso). Four examples..... **semitinctus** n. sp.

21—Scutellar stria short though always distinct.....22

Scutellar stria generally obsolete.....23

22—Form oblong-oval, rather stout and convex, very shining, black, the thoracic margins finely, diaphanously pale, the lateral margin of the elytra posteriorly, and sometimes the suture, pallescent; under surface black, the legs very pale throughout; head well developed, with moderately prominent eyes, two-thirds as wide as the prothorax, the antennæ very long and filiform, blackish, the two basal joints pale; prothorax transverse, two-fifths wider than long, widest somewhat before the middle, but with subevenly and rather strongly rounded sides; apex feebly sinuate, with narrowly blunt angles, subequal in width to the base, the basal angles very broadly rounded; surface smooth, with very fine and subentire stria and isolated, obliquely rounded foveæ, which are generally very feebly impressed and with a few strong punctures basally; elytra about one-half longer than wide and only a fourth wider than the prothorax, parallel, feebly arcuate at the sides, obtuse at apex, the sinus broad and feeble but evident; striæ rather fine but deeply impressed, the scutellar short and oblique though always evident; intervals rather strongly convex, very faintly opalescent in lustre, the discal puncture at three-fifths to two-thirds; hind tarsi slender, two-thirds as long as the tibiæ, the basal joint as long as the next two and longer than the fifth; male with the anterior tarsi rather strongly, the intermediate feebly, dilated. Length (♂ ♀) 4.4–4.8 mm.; width 1.6–2.0 mm. Rhode Island to Missouri and Texas. Very abundant. [*Acupalpus lugubris* Hald.]..... **plebejus** Dej.

Form nearly similar but shorter and with relatively broader elytra, differing greatly in coloration, being pale testaceous, apparently when mature, the head deep black, the pronotum with a large central transverse blackish area; elytra clear testaceous throughout; under surface piceous-black, the sides of the prosternum, epipleura and legs very pallid; head and antennæ nearly as in *plebejus;* prothorax also similar in every way, except that it is relatively larger and broader, one-half wider than long, with more rounded sides, still more broadly rounded basal angles and still more finely reflexed margins; elytra notably shorter, not one-half longer than wide and not a fifth wider than the prothorax, otherwise nearly similar; hind tarsi and male sexual characters nearly as in *plebejus.* Length (♂ ♀)

4.6–5.0 mm.; width 1.8–1.9 mm. Rhode Island, New Jersey and Maryland..... **fuscatus** Dej.

23—Body rather stout, moderately convex, shining, black, the periphery of the pronotum very finely pale and the elytral suture generally pallescent; under surface blackish-piceous, the epipleura but little paler, the legs very pale flavo-testaceous; head about two-thirds as wide as the prothorax, with moderately prominent eyes; antennæ very long, filiform, more than half as long as the body, blackish, the basal joint pale; prothorax almost exactly as in *plebejus* throughout; elytra shorter, not one-half longer than wide, a third wider than the prothorax, parallel, with distinctly arcuate sides and very obtuse apex, the sinus very feeble; striæ as in *plebejus*, except that the scutellar is obsolete or vestigial, this being almost a unique condition in the genus; hind tarsi as in *plebejus*, except that the basal joint is not quite so long, being somewhat shorter than the next two and equal in length to the fifth, the anterior and intermediate tarsi (♂) very moderately but subequally dilated, the intermedate relatively much more so than in *plebejus*. Length (♂) 4.2 mm.; width 1.5 mm. New York (West Point). Western Pennsylvania,—Hamilton.

humidus Ham.

24—Body oblong, rather small in size, depressed, pale rufo-testaceous in color, the head, and the elytra broadly at each side of the suture posteriorly, feebly infumate; under surface in great part piceo-testaceous, the legs pale; head two-thirds as wide as the prothorax, the eyes unusually small and not very prominent; antennæ long, slender, filiform, feebly compressed, more than half as long as the body and pale testaceous throughout; prothorax a third wider than long, widest near apical third, the sides anteriorly strongly rounded, becoming oblique and feebly arcuate posteriorly; apex strongly sinuate, with distinct and scarcely at all blunt angles and equal in width to the base or somewhat narrower; basal angles only moderately broadly rounded, rather distinct; surface feebly depressed near the hind angles and impunctate, the foveæ not differentiated; stria extremely fine but subentire; elytra short, two-fifths longer than wide and barely a fourth wider than the prothorax, somewhat widest behind the middle, very obtuse at apex, the apices oblique and nearly straight, the sinus obsolete; striæ very fine, the scutellar moderately long, parallel; intervals nearly flat; discal puncture at apical sixth; hind tarsi with the basal joint not quite as long as the next two, equal to the fifth; male with the anterior tarsi rather strongly, the intermediate moderately, dilated. Length (♂ ♀) 4.2–4.6 mm.; width 1.6–1.8 mm. California (San Francisco). Not uncommon..... **unicolor** Dej.

A—Similar to *unicolor* in nearly all structural features but relatively narrower and more elongate, clearer testaceous, the elytra without the subsutural clouded area, the prothorax relatively not so large, the elytra much more elongate, being fully one-half longer than wide and sometimes nearly two-fifths wider than the prothorax. Length (♂) 4.2–4.5 mm.; width 1.5–1.6 mm. California (Los Angeles Co.)..... **dolosus** n. subsp.

25—Pronotum pale rufo-testaceous in color.....26
Pronotum concolorous, piceous to black.....27

26—Form oblong-oval, rather stout and convex, very shining, piceous-black; head black, the prothorax above and at the sides beneath pale rufous; elytra and under surface otherwise nearly black, the suture and epipleura pallescent; legs pale flavo-testaceous; head short, wider than long, two-thirds as wide as the prothorax; eyes prominent; antennæ slender, filiform, not quite half as long as the body, fuscous, the first two joints paler; prothorax transverse, nearly one-half wider than long, subparallel, with almost evenly and strongly rounded sides; apex rather feebly sinuate, with blunt angles and about as wide as the base, the basal angles very broadly rounded; surface very evenly and moderately convex, with extremely fine stria, the foveæ small, obsolescent and impunctate; reflexed margin extremely fine; elytra two-fifths longer than wide and nearly two-fifths wider than the prothorax, parallel, with rather strongly arcuate sides and broadly, subcircularly rounded apex, the sinus obsolete; striæ very fine, the scutellar moderately long; intervals flat or nearly so, the discal puncture at apical fourth to fifth; hind tarsi slender, moderately long, the first and fifth joints equal; male with the anterior and middle tarsi subequally but only feebly dilated. Length (♂ ♀) 3.0–3.75 mm.; width 1.2–1.75 mm. Rhode Island to California (Humboldt Co.) Very abundant. [*Trechus conjunctus* Say; *Acupalpus misellus* Dej. and *Ac. rotundicollis* Hald.].....**conjunctus** Say

Form and coloration nearly similar, but with shorter prothorax and longer elytra, shining; head distinctly smaller than in *conjunctus*, three-fifths as wide as the prothorax, with rather large but only moderately prominent eyes; antennæ slender though rather short, much less than half as long as the body; prothorax nearly three-fifths wider than long, otherwise nearly as in *conjunctus*, the sides similarly strongly rounded and the basal angles very broadly; elytra much longer, about one-half longer than wide, a fourth wider than the prothorax and fully three times as long, parallel, with broadly arcuate sides, the apex more broadly and less circularly obtuse than in the preceding, with vestigial sinus; striæ nearly similar, those on the flanks extremely fine and feeble; discal puncture less posterior, at about apical fourth; male with the anterior tarsi rather feebly, the intermediate very feebly dilated, the difference more marked than in *conjunctus*. Length (♂ ♀) 3.3–3.7 mm.; width 1.25–1.5 mm. Colorado (Boulder Co.). Four examples.....**captiosus** n. sp.

Form and coloration somewhat as in *conjunctus* but smaller and with paler tints; head rufo-piceous; prothorax clear rufous; elytra blackish-piceous, broadly testaceous toward the sides and along the suture; under surface of the hind body piceous-black, the epipleura and legs very pale; head smaller than in *conjunctus*, three-fifths as wide as the prothorax, with smaller and less prominent eyes; antennæ very slender, almost one-half as long as the body, fuscous, the two basal joints pale; prothorax as in *conjunctus* but shorter, one-half or more wider than long and more strongly rounded at the sides; elytra rather less than one-half longer than wide, somewhat more arcuate

at the sides, similarly subcircular at apex, only a fourth wider than the prothorax; striæ even finer, the intervals nearly flat; discal puncture at apical fifth; male with the anterior tarsi rather strongly dilated, the intermediate slender, scarcely at all dilated, the difference being more pronounced than in either of the preceding. Length (♂♀) 3.2–3.6 mm.; width 1.2–1.35 mm. Arizona (probably southern). Three examples..... **moquinus** n. sp.

Form oblong-suboval, rather more depressed, shining; head deep black; prothorax throughout above and beneath clear rufous; elytra black, feebly pallescent toward the humeri, the suture seldom noticeably pale; under surface of the hind body black, the epipleura and legs very pale; head rather small, not quite three-fifths as wide as the prothorax; antennæ slender, fuscous, with the two basal joints pale, fully half as long as the body; prothorax differing greatly from the three preceding, larger, widest before the middle, the sides broadly and rather strongly rounded, less so basally; apex distinctly sinuate, with rather blunt angles and not quite as wide as the base, the basal angles broadly rounded; surface nearly as in *conjunctus*, the disk two-fifths to nearly one-half wider than long; elytra less than one-half longer than wide, only a fifth or sixth wider than the prothorax and two and one-half times as long, the sides rather strongly arcuate; apex circularly rounded, without trace of sinus; striæ very fine, the lateral ones subobsolete basally, the discal puncture at apical fourth to fifth; male with the anterior tarsi strongly, the intermediate feebly, dilated. Length (♂♀) 3.4–3.8 mm.; width 1.2–1.4 mm. Iowa (Keokuk) and Missouri (St. Louis). Eight specimens.

thoracicus n. sp.

27—Body elongate, suboval, rather convex, very shining, piceous-black, the elytra broadly and indefinitely toward the sides, and the suture, rufescent; margins of the pronotum, a little more widely at apex and base, pallescent; under surface blackish-piceous throughout, the epipleura dull rufous, the legs testaceous; head rather small, less than three-fifths as wide as the prothorax, the eyes well developed and prominent; antennæ slender, dark in color with pale base, much less than half as long as the body; prothorax only a third wider than long, perfectly parallel, with very evenly and strongly rounded sides; apex feebly sinuate, with well marked angles and equal in width to the base, the basal angles very broadly rounded; surface almost even throughout, rather convex, the stria very fine, the foveæ impunctate, often represented, as in the preceding four species, by a feeble puncture at a considerable distance from the base; elytra not quite one-half longer than wide, a third to fourth wider than the prothorax, parallel, with arcuate sides and circularly rounded apex, the sinus obsolete; striæ not very fine, distinctly impressed and with notably convex intervals suturad, almost obsolete and with flat intervals on the flanks, the puncture at apical fourth. Length (♀) 3.8–4.0 mm.; width 1.35–1.4 mm. Texas (Galveston). Louisiana,—LeConte. Two examples..... **rotundatus** Lec.

Body elongate-suboval, convex, more parallel than the preceding, rather deep black throughout, the margins of the pronotum finely, dia-

phanously pale, the elytral suture finely rufescent posteriorly; under surface black, the legs piceo-testaceous; head short, wider than long, fully two-thirds as wide as the prothorax, with rather prominent eyes; antennæ slender, blackish, with the two basal joints pale; rather more than half as long as the body (♂), a little shorter (♀); prothorax two-fifths wider than long, parallel, with subevenly and moderately rounded sides; apex slightly sinuate, with rather blunt angles and as wide as the base to distinctly narrower, the basal angles broadly rounded; surface nearly as in the preceding; elytra one-half longer than wide, barely a fourth wider than the prothorax, the outline somewhat as in the preceding; intervals only feebly convex suturad; scutellar stria moderately long and subparallel but very fine; male with the anterior tarsi rather strongly, the intermediate moderately dilated. Length (♂♀) 3.7–3.9 mm.; width 1.4 mm. Pennsylvania..... **scitulus** Csy.

A—Nearly like *scitulus* in color and general structure but shorter, the head smaller, with less prominent eyes, barely three-fifths as wide as the prothorax; antennæ nearly similar; prothorax relatively much smaller but otherwise similar, though only a third wider than long; elytra much shorter and relatively broader, only a third longer than wide, more broadly and obtusely rounded at apex and more than two-fifths wider than the prothorax, otherwise nearly similar; male tarsal characters nearly similar. Length (♂) 3.7 mm.; width 1.45 mm. A single male, probably from New Jersey.

incitatus n. subsp.

Cincticollis Lec., is unknown to me and I have simply made use of the originally published characters; it appears to be closely allied to *anceps*. *Fuscatus* was considered to be an "immature variety" of *plebejus* by LeConte, but I do not think that it has exactly that status; it is a little broader in form, with shorter and broader prothorax, which, in conjunction with the peculiar coloration as described above, will always enable one to separate it readily from immature specimens of *plebejus*. *Gracilis* Csy., is placed doubtfully under *ochropezus* in the table.* The only species common to the Atlantic and Pacific faunal regions is *conjunctus*, one example of which I took in the mountains of Humboldt Co.,

* The type of this species and of ten or twelve others in such genera as *Bembidion*, *Tachys*, *Amara*, *Colon* and *Lachnosterna*, disappeared from my collection many years ago and I have no idea where they are at present. They certainly do not appear to be in the LeConte collection at Cambridge, Mass. Perhaps they may be found in the Horn collection in Philadelphia, having been inadvertently left there after direct comparisons had been made. *Gracilis* is probably not the same as *ochropezus*, where it was placed by Horn, and the smaller prothorax, longer elytra, and strongly convex elytral intervals, would seem to prove conclusively that it cannot be *abstinens* of the above table, though the geographic habitat is nearly the same.

Cal., not differing from the eastern examples in the minutest particular. It seems to be as widely diffused a species as *Harpalus caliginosus*.

It will be noted that the groups suggested by LeConte, depending upon the relative degree of dilatation of the middle male tarsi, are not adopted in the above arrangement. I find that species otherwise closely resembling each other, may have the anterior and middle tarsi of the male subsimilarly or very differently dilated, and that neighboring species have somewhat intermediate stages of dilatation of the middle tarsi. Besides necessitating the presence of the male, which is unsatisfactory for purposes of identification, I do not think such grouping is quite natural, for the reasons stated. The geographic classification is fully as natural at least and is manifestly more convenient.

Agonoleptus n. gen.

In this genus the body is subparallel, rather depressed and with pallid coloration, the head moderate in size, with prominent eyes, fine oblique foveæ not attaining the eyes, rather short, thick mandibles, finely and acutely hooked at apex and long very slender antennæ. The hind angles of the prothorax are rounded, the scutellar stria notably short, the lateral line of foveæ moderately interrupted medially and the striæ and intervals but little modified at the elytral apex; there is a single posterior discal puncture. The hind tarsi are slender and filiform but, though of nearly the same relative structure as in *Stenolophus*, are decidedly shorter. The emargination of the mentum is narrowly parabolic or almost triangular, with rounded angle and the margins of the notch are double throughout; there seem to be no setæ on the mentum, but there is one at each end of the pedestal or gular support of the mentum. The labial palpi are slender, the second joint a little shorter than the third, with three setæ as in *Stenolophus*, the third joint rapidly and finely subulate at apex. The ligula is rather short and narrow, moderately increasing in width apically, the paraglossæ small, diverging and acute at tip. The inner lobe of the maxilla is broadly and strongly falcate at tip, the inner fringe composed of long and rather slender sparse hairs, the last joint of the outer lobe not longer than the second labio-palpal joint, swollen

basally, gradually finely acuminate and slightly arcuate distally. The fourth joint of the maxillary palpi is less than one-half longer than the third; it is rapidly finely subulate at tip. The last segment of the abdomen in the female is very broadly, subevenly and circularly rounded and bears the usual four long setæ near the apical margin.

Agonoleptus is evidently one of the connective bonds between *Stenolophus* and *Agonoderus*, possessing some suggestive characters of each, although on the whole closer to the former. The single known species is as follows:

Narrowly subparallel, subdepressed, shining, pale and very uniform testaceous in color throughout the body above and beneath, the head and legs also pale; head actually small but relatively moderate, three-fifths as wide as the prothorax, the eyes very convex and prominent; antennæ very slender, filiform, more than half as long as the body; prothorax but little more than a fourth wider than long, widest before the middle, the sides rather strongly rounded, gradually less so and converging basally, the apex feebly sinuate, with rather blunt angles and much wider than the base, the basal angles broadly rounded; surface very smooth, wholly impunctate, extremely finely reflexed at the sides, the median stria very fine but distinct and entire, the foveæ represented by small punctiform impressions at a considerable distance from the base; elytra more than one-half longer than wide, barely a fourth wider than the prothorax, parallel, with feebly arcuate sides and abruptly broadly and very obtusely rounded apex, the sinus completely wanting and not even traceable; striæ feebly impressed, the scutellar very short, oblique; intervals feebly convex, the discal puncture between apical fourth and fifth; legs short, the hind tarsi with the first joint as long as the next two combined but not quite as long as the fifth. Length (♀) 4.0–4.5 mm.; width 1.2–1.35 mm. Colorado (Colorado Springs—6100 feet),—Wickham . . . . . **parviceps** n. sp.

There seems to be some community of structure and facies between this species and *Stenolophus unicolor*, and possibly the latter might with propriety be removed from *Stenolophus* and placed in the present genus, although the emargination of the mentum is there much larger and more rounded and the surface behind it flat, with the usual two erect setæ, this surface being concave and apparently without setæ, except perhaps one or two at the sides of the mentum, in *Agonoleptus*. The marginal edge of the notch, also, is not doubled in *unicolor* and the scutellar stria is long and parallel, the hind tarsi with a longer basal joint. The peripheral

erect setæ of the elytra in *unicolor* do not exist in the two examples of *parviceps* at hand. At any rate, *unicolor* is a very aberrant species in *Stenolophus* and may require a special genus.

Tachistodes n. gen.

This is another genus between *Stenolophus* and *Agonoderus*, but closer to the latter than to the former. The body is very small in size and convex, with large head and very prominent eyes, rather short and thick antennæ, which are more nearly as in *Agonoderus*, to which genus the species are now attached in the lists. The prothorax is nearly as in that genus and has the basal angles similarly rounded, but the scutellar stria of the elytra is extremely short or obsolete. The hind tarsi are still shorter than in *Agonoleptus* and almost as in *Agonoderus*, except that they are filiform and not tapering from base to tip as in that genus; the first three joints decrease rather uniformly in length, the first being very much shorter than the fifth. The anterior tarsi of the male are but feebly swollen and have beneath a double series of very small, short, thin and hyaline squamæ, the intermediate tarsi wholly unmodified. The emargination of the mentum is small, deep and narrowly parabolic in form, with the edges of the notch duplex and beveled and there are two erect setæ on the mentum near the notch. The ligula is short, narrow, only feebly enlarged apically and the paraglossæ are diverging, rather thick and curl inward. The labial palpi are as in *Stenolophus* but shorter and the second joint bears the three setæ of that genus, of which the two regular ones of the tribe are medial on the anterior margin, the apical very long and on the posterior side; the maxillary palpi and inner and outer lobes of the maxilla are also as in *Stenolophus*, the fringe of the inner lobe rather short and fine. The mandibles are short and the oblique frontal foveæ attain the eyes. The elytra have one long seta and several short ones at the margin near the base and two long ones posteriorly, nearly as in most of the Stenolophi; the elytral striæ and intervals are only slightly stronger on the apical declivity.

There are comparatively few species and these are well differentiated among themselves as follows:

Head very large, only just visibly narrower than the prothorax, with

large and very prominent eyes. Body narrow, elongate, subparallel, convex, shining, piceous-black, the prothorax slightly paler, wholly pale or only toward the edges in the more mature forms; under surface of the hind body blackish, the epipleura and legs pale; head smooth, not as long as wide; antennæ blackish, the two basal joints paler, barely longer than the head and prothorax, the joints very short in form; prothorax two-fifths wider than long, widest near apical third, the sides strongly rounded anteriorly, oblique and nearly straight in about basal half; apex sinuato-truncate, evidently wider than the base, which is arcuate, with the angles broadly rounded; surface finely reflexed at the sides, with a rather strong entire median stria, the foveæ large, indefinite, feeble and with numerous rather coarse sparse punctures, many of the latter are also scattered along the course of the anterior obsolete transverse impression; elytra nearly one-half longer than wide, not quite a fourth wider than the prothorax, parallel, with feebly arcuate sides and circularly rounded apex, the sinus very feeble but evident; striæ impressed, the intervals rather convex; discal puncture near apical third; hind tarsi two-thirds as long as the tibiæ, which are relatively short. Length (♀) 3.0–3.7 mm.; width 1.0–1.2 mm. New York and Virginia to Louisiana and Texas. [*Acupalpus indistinctus* Dej.]..... **indistinctus** Dej.

Head much narrower than the prothorax, the eyes always prominent though less developed than in the preceding species..... 2

2—Head pale in color, concolorous. Body and legs throughout pale testaceous, the elytra not clouded; head three-fourths as wide as the prothorax; antennæ blackish to paler, the two basal joints always pale; prothorax as in the preceding in every detail, except that the sides are more evenly rounded, not becoming straight basally; elytra shorter and relatively broader, two-fifths longer than wide and nearly a third wider than the prothorax, parallel, the sides feebly arcuate; apex subcircularly very obtuse, the sinus obsolete; striæ impressed, the scutellar very short to wholly obsolete; intervals rather feebly convex; discal puncture near apical fourth; hind tarsi very short, three-fifths as long as the tibiæ, the fifth joint long as usual. Length (♂♀) 2.4–2.7 mm.; width 0.8–0.9 mm. Rhode Island to Texas. Abundant. [*Acupalpus testaceus* Dej.; *Agonoderus micros* Lec.]. **testaceus** Dej.

Head black or blackish in color..... 3

3—Form subparallel, convex, shining, testaceous, the head black; elytra black almost throughout, sometimes more or less broadly pallescent laterally; under surface of the hind body black to red-brown; epipleura and legs pale; head and antennæ as in *testaceus*, except in color; prothorax nearly similar but less transverse, only about a third wider than long, widest before the middle but with the sides subevenly rounded, converging and less arcuate basally; apex sinuato-truncate and a little wider than the base; surface as in *indistinctus* throughout; elytra nearly one-half longer than wide, a fourth wider than the prothorax, parallel; apex obtusely, subcircularly rounded; the sinus obsolete; striæ rather fine and feebly impressed, the scutellar extremely short; intervals very feebly convex; discal puncture near

apical third; hind tarsi short though somewhat longer than in *testaceus*. Length (♂♀) 2.4–3.0 mm.; width 0.8–1.1 mm. Rhode Island and New York to North Carolina. Abundant. *Acupalpus pauperculus* Dej.; *Ac. consimilis* Dej.]..... **pauperculus** Dej.

Form somewhat similar but with a slightly smaller head, elongate, subparallel, shining, testaceous, the head black, each elytron with an elongate blackish cloud; under surface of the hind body blackish; legs pale; head two-thirds as wide as the prothorax; antennæ fuscous, paler basally, extending distinctly behind the thoracic base; prothorax nearly as in *indistinctus;* two-fifths wider than long, the sides strongly rounded anteriorly, very oblique and nearly straight basally; surface as in the preceding, except that the anterior punctures are very few in number, the latero-basal fewer and coarser; elytra similar in form but only about a sixth wider than the prothorax and with more impressed striæ and more convex intervals. Length (♂) 3.0 mm.; width 1.1 mm. New Jersey (Atlantic City). [*Acupalpus humilis* Dej.]..... **humilis** Dej.

Form nearly as in *pauperculus* but larger, shining, subparallel, pale testaceous in color throughout, the head black; legs pale; head two-thirds as wide as the prothorax, the antennæ slender as usual on the thin side, but rather broad on the compressed side, fuscous, paler basally, extending well behind the thoracic base; prothorax two-fifths wider than long, widest near anterior third, the sides there rather broadly rounded, converging and gradually less rounded basally, the other characters as in *indistinctus*, except that the punctures anteriorly and latero-basally are generally sparser; elytra one-half longer than wide and a fifth wider than the prothorax, less obtuse at apex than in some of the preceding and circularly rounded; striæ impressed, the scutellar generally distinct; intervals moderately convex; hind tarsi three-fifths as long as the tibiæ. Length (♂♀) 3.0–3.5 mm.; width 1.0–1.2 mm. Long Island to Iowa and Texas (Galveston). Abundant. [*Trechus partiarius* Say; ? *Bradycellus nigriceps* Lec.]..... **partiarius** Say

Form somewhat as in *partiarius* but very much smaller in size and with relatively smaller antennæ, shining, convex, pale testaceous in color, the head and a long cloud on each elytron infumate; under surface of the hind body blackish; the epipleura and legs very pale; head smooth, three-fourths as wide as the prothorax, with prominent eyes, the vertex without trace of median puncture in the type; antennæ relatively smaller than in any other species, fuscous, paler basally, slender and barely as long as the head and prothorax, the latter narrower and more narrowed basally than in *testaceus* or *partiarius* but similar in general form and sculpture, about a third wider than long, the arcuate base much narrower than the apex; elytra nearly as in *partiarius*, the scutellar stria shorter, vestigial; hind tarsi very short and slender, the fifth joint fully as long as the first two combined as usual. Length (♀) 2.4 mm.; width 0.78 mm. New Jersey (Atlantic City)..... **fusciceps** n. sp.

A specimen of the true *partiarius*, from the coast region of

Virginia, has been in my collection for many years under the name *Bradycellus nigriceps* Lec., but just how determined I do not remember; if the identification is correct the announced synonymy is true beyond question, but I cannot exactly reconcile the statement in regard to *nigriceps*, that the hind angles of the prothorax are "very slightly prominent"; in all the species of this genus they are obtuse and rounded. The original description of *nigriceps* is as follows:

Bradycellus nigriceps Lec.—Less elongate than the others of this group—*rupestris*, *parallelus*, *tantillus*—black; prothorax, elytra and feet testaceous; antennæ brown, with the first two joints pale; prothorax wider than long, more narrowed behind, sides scarcely sinuate near the base; hind angles obtuse, very slightly prominent; basal impressions feeble, with a few punctures; eyes smaller and less prominent than usual. Length 3.75 mm. New Jersey and Virginia, two specimens.

It will be observed that nearly all the characters given suit the present genus better than *Stenocellus* and I have but little doubt that *nigriceps* is, at any rate, generically different from *rupestris* and *tantillus*. The measurement of length can be disregarded, as it is almost certainly excessive.

I am somewhat in doubt concerning the identification of *humilis* Dej.; LeConte states, on the authority of Zimmermann, that it may be the same as *indistinctus* Dej., but the large head is specially alluded to by Dejean in his description of *indistinctus* though not mentioned under *humilis*. It is probable, therefore, that the two are not identical and that *humilis* is more nearly allied to *pauperculus*.

Agonoderus Dej.

The species of this genus are much larger than those of *Tachistodes* but present many characters in common, such as the convex surface, prominent eyes, stout antennæ, rounded basal angles of the prothorax and very feeble male sexual characters. There are also some daptiform characteristics, as pointed out by Dejean, the legs being stout and the tarsi short; the posterior differ from those of *Tachistodes* in tapering from base to tip, somewhat as in the Daptid genus *Geopinus*. The body is oblong-oval, convex, generally pallid in color, the head short, the eyes large and prominent, the oblique frontal foveæ prolonged by a fine line which attains the

eyes as in *Stenolophus* and the antennæ are shorter and thicker, but otherwise as in that genus. The emargination of the mentum is deep, much more broadly parabolic than in the preceding genus and the bottom of the notch is sometimes subprominently arcuate at its middle, suggesting a rudimentary tooth. The mentum bears two long discal setæ near the notch. The ligula is long, distinctly dilated at apex, the paraglossæ diverging, rather slender, concave and narrowly rounded or subacute at their apices. The labial palpi are only moderate in length, the second joint with two long anterior and single postero-apical setæ, exactly as in *Stenolophus*, but here the third joint is slender, very gradually and more obtusely pointed and is apparently not quite as long as the second joint. The inner lobe of the maxilla is strongly falciform, the inner fringe long and coarse, the last joint of the outer lobe rather long, very slender and gradually pointed distally and slightly arcuate. Sexual differences are more feebly developed than in any other genus of the tr be, excepting the preceding. The anterior tarsi of the male are barely visibly more swollen than in the female, though usually a little shorter, and they bear beneath two series of long, slender, internally crenate and hyaline squamæ, often difficult to observe; the middle tarsi are unmodified. The abdomen bears some sparse pubiferous punctures, analogous to the accessory setæ of nearly all the Daptids and some Harpalids—a character recurring frequently in the subfamily and present also in *Stenolophus;*—the last segment bears four apical setæ in both sexes, the apex being slightly more lobiform medially in the male than in the female.

The components of the genus are numerous but have been scarcely at all studied thus far, except in a rather superficial way by LeConte. The species may be arranged as follows:

Body very stout in form, the pronotum pale but with two central black spots.....2

Body more slender, the pronotum variously colored but never with two black spots.....3

2—Form very stout and convex, oblong-oval, moderately shining, pale flavo-testaceous in color, the vertex with a transverse black chevron, the pronotum with two rounded central spots arranged transversely, the elytra each with a deep black vitta on intervals 2–4 from near the apex to basal third or fourth, bifid anteriorly; under surface and legs pale throughout; head two-thirds as wide as the prothorax; antennæ thick, not attaining the thoracic base, testaceous, densely

pubescent; prothorax fully two-fifths wider than long, widest at apical third, the sides there moderately rounded, thence sensibly convergent and straighter to the very broadly rounded basal angles; apex sinuato-truncate, rather wider than the base; surface smooth, rugulose toward the sides and base, the anterior transverse impression rather sharp and distinct; foveæ very feeble, broadly sublinear, finely and rather closely punctate; elytra nearly one-half longer than wide, a fifth wider than the prothorax, parallel, with broadly arcuate sides and very obtusely ogival apex, the sinus short and subobsolete; striæ strong and groove-like, the scutellar rather long; intervals nearly flat, the striæ and intervals not differing much apically; discal puncture at apical fourth or fifth; lateral line of foveæ widely interrupted medially; hind tarsi short, thick basally, the first three joints decreasing gradually and very slowly in length, the fifth nearly as long as the first two combined. Length (♂ ♀) 7.0–8.0 mm.; width 2.8–3.0 mm. Delaware and Indiana to Texas (El Paso). [*Carabus lineola* Fabr. and *C. furcata* Fabr. (a variety with immaculate pronotum)] ..... **lineola** Fabr.

Form less stout than in *lineola* and much more shining; coloration similar, except that the entire front and occiput are black, excepting a pale region near the eyes and a rounded pale spot at the middle of the occiput and that the elytral vittæ are only very briefly bifurcate anteriorly, but differing especially in having all the black areas of the upper surface strongly metallic greenish in lustre and not pure black and without trace of coloration as they are in *lineola;* head three-fourths as wide as the prothorax, with still larger and more prominent eyes, these being separated across the vertex by only four times their own width; antennæ nearly similar; prothorax less than a third wider than long, the sides less converging posteriorly, the basal angles much less broadly rounded; base broadly arcuate and fully as wide as the sinuato-truncate apex; surface nearly similar, the median stria even more excessively fine; elytra scarcely one-half longer than wide, fully two-fifths wider than the prothorax, the sides rounding behind to the ogival apex from just behind the middle and not in apical third as in the preceding, the sinus more nearly obsolete; striæ finer, the scutellar extremely short and almost obsolete; intervals flat, the discal puncture at apical fourth; hind tarsi nearly similar. Length (♀) 6.5 mm.; width 2.7 mm. Louisiana (Alexandria) ..... **binotatus** n. sp.

Form and coloration somewhat as in *lineola* but with the prothorax nearly quadrate, the hind angles obtuse but only slightly rounded, the sides less rounded than in *lineola;* head black behind the eyes and with a rounded occipital pale spot; elytra with two dark stripes as in *lineola;* scutellar stria long. Length 8 mm. California and Nevada. **maculatus** Lec.

3—Upper surface black, with greenish or bronzy lustre, the sides of the pronotum sometimes abruptly pale, the sides of the elytra more or less broadly and nubilously, and the suture, testaceous; under surface deep black, the hypomera, epipleura and legs pale testaceous. Head nearly three-fourths as wide as the prothorax, with very prominent

eyes, the frontal foveæ very deep, the triangle adjoining them externally testaceous; antennæ less stout than usual, fuscous, the first two joints paler; prothorax differing greatly from the preceding, fully two-fifths wider than long, perfectly parallel and widest at the middle, the sides very evenly and rather strongly arcuate from apex to the very broadly rounded basal angles; apex sinuato-truncate and as wide as the base; surface very smooth and even, extremely finely reflexed at the sides, the median stria extremely fine; base sparsely punctate between the foveæ, which are oval, deeply impressed and sparsely punctate; elytra two-fifths longer than wide and two-fifths wider than the prothorax, parallel, with broadly arcuate sides and obtusely rounded apex in apical third, the sinus vestigial; striæ rather strong, deep, abrupt and groove-like, the scutellar rather short and fine; discal puncture completely wanting; hind tarsi short, more slender than usual though tapering, the first joint very slightly longer than the second, the fifth as long as the first two. Length (♂♀) 5.2–6.2 mm.; width 2.0–2.4 mm. Texas (Galveston—abundant) and Florida. New York,—LeConte. [*A. suturalis* Lec.].
infuscatus Dej.

Upper surface testaceous, with incomplete black vittæ, the head darker or black; discal puncture of the elytra always distinct; prothorax not at all as in *infuscatus* but nearly as in the *lineola* section, widest before the middle.....4

4—Pronotum deep black from apex to base, the side margins in lateral sixth or seventh abruptly very pale testaceous. Body rather narrowly oblong-suboval, moderately convex, strongly shining, deep black, the sides of the prothorax sharply, and the apex and about outer half of the elytra, pale testaceous; under surface black, the hypomera, epipleura, apex of the abdomen and the legs pale testaceous; head very large, nearly five-sixths as wide as the prothorax, the eyes large and very prominent; epistoma, labrum and mandibles rufous, the last black at tip; antennæ not very stout, extending rather behind the thoracic base, fusco-testaceous, paler basally; prothorax about a third wider than long, the sides rounded, becoming oblique and straight posteriorly, the basal angles obtuse but only very slightly rounded, very distinct; base arcuate laterally, not quite as wide as the sinuato-truncate apex; surface moderately finely reflexed at the sides, with very fine stria, the anterior and posterior transverse impressions distinct, the base rather strongly, sparsely punctured from near the middle almost to the sides, the foveæ rather narrow but very feeble; elytra one-half longer than wide, a fourth wider than the prothorax, parallel, obtusely ogival in apical third, the sinus vestigial; striæ moderately fine, impressed, the scutellar very short; intervals distinctly convex, the discal puncture near apical fourth; hind tarsi with the first joint much longer than the second but shorter than the fifth. Length (♂) 4.8 mm.; width 1.8 mm. Iowa (Keokuk).....**idoneus** n. sp.

Pronotum pale, with a short vittiform median dark spot or with a larger central transverse dark area, which in less developed form becomes

trifurcate from the base, the maculation frequently faded, the disk becoming wholly pale.....5

5—Basal angles of the prothorax very narrowly rounded or blunt, though always obtuse; elytral black spot produced anteriorly along the suture.....6

Basal angles very broadly rounded; elytral black spot truncate anteriorly, not suturally prolonged; scutellar stria much more developed; head smaller.....10

6—Hind tarsi very stout basally, the third joint not or but slightly longer than wide.....7

Hind tarsi much less stout to notably slender, though always tapering, the third joint much longer than wide.....8

7—Body rather stout, convex, oblong-oval, shining, rufo-testaceous, the head piceous-black, the middle of the vertex feebly pallescent, the antennal triangle pale; pronotum with a large transverse central blackish area, the elytra with a large common oblong black area, produced anteriorly though seldom attaining the base and with the sutural interval rufo-piceous; under surface black, except the sides of the prosternum and the epipleura; legs very pale; head smooth, large, but little narrower than the prothorax, the vertex sometimes with a median puncture; eyes large and very prominent; antennæ stout, obscure testaceous, extending to the thoracic base; prothorax two-fifths wider than long, widest a little before the middle, the sides rounded, becoming oblique and straight posteriorly; apex truncate, with very obtuse obliterated angles and a little wider than the base, which is arcuato-truncate, with obtuse but rather well defined angles, which are only slightly blunt at their apices; surface strongly declivous laterally, the edges very finely reflexed; median stria distinct but anteriorly abbreviated, the obsolete anterior impression punctureless; base sparsely but strongly punctured from side to side, more obsoletely medially, the foveæ vague and feeble; elytra one-half longer than wide and two-fifths wider than the prothorax, parallel, with distinctly arcuate sides and subcircularly rounded apex, the sinus vestigial; striæ deeply impressed, the scutellar short though generally distinct, deep; intervals convex; discal puncture behind apical third; hind tarsi very stout, piceous, the fifth joint fully as long as the first two. Length (♂ ♀) 5.3–6.6 mm.; width 2.0–2.35 mm. North Carolina (Asheville) to St. Louis and Keokuk, Mississippi, Louisiana and Texas (Waco and El Paso). Abundant. [*Carabus pallipes* Fabr.; *Ag. lecontei* Chd.].....**pallipes** Fabr.

Body stout, more ventricose, the elytra broader, the anterior parts relatively smaller than in *pallipes;* coloration similar but more pallid throughout in the type; piceous-black spot of the elytra shorter than in the preceding and still more widely separated from base and apex; head piceous, large, four-fifths as wide as the prothorax, the prominent eyes not quite so large as in the preceding, the antennæ similar; prothorax almost uniformly piceo-testaceous in the type, less transverse, a third wider than long, otherwise nearly as in *pallipes* throughout; elytra in outline and striation nearly as in *pallipes* but fully one-half wider than the prothorax, the scutellar

stria still shorter and feebler; hind tarsi a little shorter than in the female of *pallipes*, very stout, the fifth joint fully as long as the first two, the third barely at all longer than wide. Length (♀) 6.8 mm.; width 2.4 mm. Wisconsin.....**plagiatus** n. sp.

8—Form stout, somewhat as in *pallipes*, the coloration and lustre throughout nearly as in that species; head black, large, nearly four-fifths as wide as the prothorax, the eyes large and very prominent; vertex without a central puncture in the type; antennæ fusco-testaceous, moderately stout, extending about to the thoracic base; prothorax throughout as in *pallipes*, except that the hind angles are evidently though very narrowly rounded; elytra shorter, less than one-half longer than wide and fully two-fifths wider than the prothorax, otherwise as in *pallipes* throughout, the scutellar stria rather short but deeply impressed and subparallel; hind tarsi differing greatly, much longer, three-fourths as long as the tibiæ, the fifth joint not quite as long as the first two, the third one-half longer than wide. Length (apparently ♀) 5.0 mm.; width 2.1 mm. Texas (El Paso),—Dunn.
tarsalis n. sp.

Form much more slender than in any of the preceding and smaller in size, similar to *pallipes* in lustre and coloration throughout.....9

9—Body small in size, elongate-oval, convex, shining; head notably large, only very little narrower than the prothorax, the eyes large and very prominent; antennæ longer, fusco-testaceous, moderately stout, extending well behind the thoracic base; prothorax widest at anterior two-fifths, a third wider than long, the sides broadly and rather strongly arcuate, becoming oblique and straight basally; apex sinuato-truncate, barely wider than the base, the basal angles obtuse but well defined, only very narrowly blunt at their apices; surface throughout nearly as in *pallipes*, except that the median stria is almost entire; elytra throughout nearly as in *pallipes* but scarcely more than a fourth wider than the prothorax; hind tarsi rather slender, the third joint much longer than wide. Length (♂) 5.0 mm.; width 1.8 mm. Arkansas.....**vividus** n. sp.

Body small in size, narrowly oval, the anterior parts relatively rather small; head large, five-sixths (♂) to four-fifths (♀) as wide as the prothorax, the eyes large and very prominent; antennæ fuscous, paler basally, only moderately stout, extending behind the thoracic base; prothorax rather small, two-fifths wider than long, widest at two-fifths from the apex, the sides rounded, moderately oblique and nearly straight basally, the basal angles obtuse, well defined, finely blunt at their apices; surface pale, with a very large transverse blackish central area as in *pallipes*, the other features also nearly as in that species, the stria more nearly entire; elytra a little shorter than in *pallipes* but otherwise similar, two-fifths wider than the prothorax; scutellar stria longer than usual in this section, parallel and deeply impressed, nearly a third as long as the basal thoracic width; hind tarsi moderately slender, concolorous and not darker than the tibiæ, the third joint distinctly longer than wide. Length (♂♀) 5.0–5.2 mm.; width 1.7–1.9 mm. Texas (Waco).
vacans n. sp.

10—Species of the Atlantic regions 11
Species of the Rocky Mountain, Sonoran and Pacific regions 15
11—Prothorax much wider before the middle than at base 12
Prothorax but little wider before the middle than at base, less transverse and more quadrate 14
12—Body rather large and stout. Coloration and lustre throughout as in *pallipes;* head distinctly smaller than in the *pallipes* section, three-fourths as wide as the prothorax, the eyes large and very prominent; antennæ stout and fusco-testaceous, extending distinctly behind the thoracic base; prothorax two-fifths wider than long, widest near apical third, the sides strongly rounded, becoming oblique and feebly arcuate basally; apex sinuato-truncate, with rather distinct though obtuse angles and about as wide as the base, the basal angles broadly rounded; surface pale, with a large transverse nubilous black central area, which is frequently trifid or altogether obsolete, the sides rather strongly and not very finely reflexed; stria fine, distinct, subentire, generally more distinct basally; foveæ large but very feeble and vague, with rather close-set distinct punctures extending to the sides but nearly wanting medially; elytra one-half longer than wide and a third wider than the prothorax, parallel, rapidly very obtusely rounded at apex, the sides only feebly arcuate; sinus barely traceable; striæ rather fine but impressed, the scutellar long and deep, parallel; intervals moderately convex; discal puncture before apical fourth; hind tarsi three-fourths as long as the tibiæ, moderately slender, the fifth joint as long as the first two, the third distinctly longer than wide. Length (♂ ♀) 5.8–7.3 mm.; width 2.0–2.6 mm. Virginia, Rhode Island and Vermont to Lake Superior and St. Louis, Missouri. Very abundant. [*Carabus comma* Fab., *Feronia pallipes* and *Acupalpus pallipes* Say and Dej. nec. Fab.; *Ag. dorsalis* Lec.].
comma Fabr.
Body much smaller and less stout though similar in coloration and lustre, the broad black sutural region of the elytra similar, generally abbreviated though often attaining the base, the suture similarly always testaceous and generally more pallidly so than in the *pallipes* section; hind tarsi more slender 13
13—Form elongate-oval, rather convex, shining; head black, with the labrum very pale, rather more than three-fourths as wide as the prothorax, the eyes (♂) large and very prominent, separated across the vertex by barely more than four times their width; antennæ fusco-testaceous, stout, extending slightly behind the thoracic base; prothorax as in *comma* throughout, except that the pallid disk has only an oblong vittiform central blackish spot and the basal angles are not quite so broadly rounded; elytra nearly as in *comma* throughout and also in relationship with the prothorax, the scutellar stria long, deep and parallel, the black maculation truncate anteriorly at a considerable distance from the base in the type; hind tarsi much more slender, the fifth joint similarly long, the third triangular and one-half longer than wide. Length (♂) 5.7 mm.; width 2.0 mm. Texas (Austin). A single example, taken by the writer.
oculatus n. sp.

Form elongate-suboval though more parallel than in *oculatus*, the anterior parts relatively larger; coloration as in *comma;* head and eyes nearly as in the preceding; antennæ darker, stout, blackish, the two basal joints pale, extending but little behind the thoracic base; prothorax nearly as in *comma* throughout, fully two-fifths wider than long, the basal angles rather broadly rounded; surface similar, pale rufo-testaceous, the central darker marking very nubilous and indefinite in the types; elytra much longer than in *oculatus*, nearly three-fifths longer than wide, parallel, with feebly arcuate sides and circularly rounded apex, less than a fourth wider than the prothorax, the sinus wholly obsolete; striæ impressed, the scutellar long and rather deep, parallel; intervals only very moderately convex, the puncture similar; hind tarsi very slender though feebly tapering from base to tip as usual, the fifth joint shorter than the first two, the third distinctly elongate. Length (♂ ♀) 5.4–5.9 mm.; width 1.8–2.0 mm. Two examples without label in the Levette collection but probably taken in Indiana, also one example from New York.

gracilitarsis n. sp.

14—Body rather large in size, somewhat as in *comma* and similar throughout in coloration; head black, three-fourths as wide as the prothorax, with the usual prominent eyes; antennæ stout, infuscate, paler basally, short, scarcely extending to the thoracic base; prothorax subquadrate, not a fourth wider than long, the sides broadly arcuate, a little less so basally, widest just before the middle; apex sinuato-truncate, with obtuse but rather distinct angles and equal in width to the feebly arcuate base, the basal angles very broadly rounded; surface feebly convex, with evident anterior transverse impression and a fine stria from the impression nearly to the base, the latero-basal region coarsely, closely and conspicuously punctured to the sides, the punctures extending through the median region but only near the base, the foveæ large, very feeble and vague; elytra as in *comma*, fully two-fifths wider than the prothorax, the scutellar stria long, deep and parallel; hind tarsi pale, moderately slender, of the usual structure, the third joint distinctly longer than wide. Length (♂) 7.8 mm.; width 2.8 mm. Oklahoma. One specimen.

quadricollis n. sp.

15—Basal angles of the prothorax broadly rounded as in *comma*. 16

Basal angles rounded but much more narrowly than in 16. 18

16—Body parallel in outline, the prothorax but little narrower than the elytra. Coloration nearly as in *comma* throughout; head moderate, not quite three-fourths as wide as the prothorax, with prominent eyes and a feeble punctiform impression at the middle of the vertex in the type; antennæ moderately stout; prothorax large, more than a third wider than long, the outline nearly as in *comma;* surface with some fine obsolescent transverse wavy wrinkles, coarsely, deeply and rather closely punctate toward base from side to side, the entire basal region somewhat depressed, the foveæ not defined, obsolete; anterior transverse impression very feeble, the stria extremely fine; elytra parallel, with feebly arcuate sides and subcircularly rounded apex, nearly three-fifths longer than wide and barely a fourth wider

than the prothorax, the striæ deeply impressed, the scutellar very long and deep; intervals convex, the discal puncture strong, before apical fourth; sinus simply an oblique straight part of the edge near the sutural angles, which are somewhat obtuse; hind tarsi rather slender, of the usual structure, the third joint one-half longer than wide. Length (♀) 5.8 mm.; width 2.2 mm. California (North Fork, Madera Co.). One specimen.....**rectus** n. sp.

Body oblong-suboval as in *comma* and allied forms.....17

17—Form stout, with coloration and lustre nearly as in *comma* but with more flavate and thinner integuments, the pronotum never more than medially and very nubilously infuscate and the elytral vittæ rather oblique in direction when in reduced stage, or parallel and anteriorly truncate when fuller, always rather short and not extending before basal third to fourth; head more than three-fourths as wide as the prothorax, black when mature, with very prominent eyes; vertex generally without a central puncture; antennæ short though attaining the thoracic base; prothorax a third wider than long, subprominently rounded and widest at two-fifths from the apex, the sides thence feebly arcuate basally; surface nearly as in the preceding, the basal punctures rather smaller, obliterated and replaced by a few rugæ medially; elytra oblong, of the usual form, rounded behind and without sinus, one-half longer than wide to somewhat less, two-fifths wider than the prothorax, the striæ impressed, the scutellar moderate, sometimes rather short; intervals moderately convex; hind tarsi rather stout, the fifth joint not as long as the first two, the third distinctly longer than wide. Length (♂♀) 5.8–7.2 mm.; width 2.2–2.8 mm. Utah (Provo) and, in slightly varietal forms, from Colorado (Fort Collins) and New Mexico (Jemez Springs).

obliqulus n. sp.

Form much narrower, elongate-suboval, shining, very pale flavo-testaceous throughout, the head but little less pale, the elytra sometimes with traces of the usual maculation of the *comma* section; head three-fourths as wide as the prothorax, the eyes as usual; vertex with or without a punctiform impression; antennæ pale, moderately stout, rather long, extending well behind the thoracic base; prothorax a fourth to nearly a third wider than long, widest behind apical third, the sides rather strongly rounded anteriorly, oblique and very feebly arcuate posteriorly, the apex sinuato-truncate and equal to the very feebly arcuato-truncate base, the basal angles rather broadly rounded; surface very smooth, with fine and entire median stria, the feebly flattened latero-basal region with strong but not very close-set punctures, the median part smooth and broadly impunctate; transverse impressions obsolete; elytra long, fully three-fifths longer than wide and a third wider than the prothorax, parallel, evenly rounded behind and without sinus; striæ strong, feebly impressed, the scutellar long, parallel, moderately deep; hind tarsi rather slender, pale. Length (♂♀) 5.8–6.2 mm.; width 1.8–2.2 mm. Arizona (probably southern). Five examples.....**pallescens** n. sp.

18—Form oblong-suboval, moderately convex, less shining than usual, testaceous, the head black, the pronotum with a central oblong

blackish spot which is sometimes obsolete, the elyra each with a broad biabbreviated subsutural blackish vitta, truncate anteriorly at a considerable distance from the base; under surface, excepting the prosternum anteriorly and laterally and the epipleura, blackish-piceous; legs very pale as usual; head more than three-fourths as wide as the prothorax, the eyes very prominent; antennæ fuscous, paler basally, rather stout; front above the antennæ pallid as usual; prothorax relatively rather small, a third to two-fifths wider than long, widest at two-fifths from the apex, the sides moderately rounded, oblique and straight to subsinuate posteriorly, the basal angles obtuse but not so broadly rounded as usual; surface with the lateral edges more strongly reflexed than usual, especially toward base, having numerous fine and transversely wavy, close-set feeble rugulations, the stria fine, somewhat impressed, the anterior impression obsolete, the posterior usually represented by a fine feeble median angulation; latero-basal parts feebly flattened and with numerous moderate punctures, which are generally obsolete medially; elytra rather more than one-half longer than wide and fully two-fifths wider than the prothorax, of the usual form and striation, the scutellar stria only moderately long and the sinus vestigial; hind tarsi unusually short, the third joint longer than wide. Length (♂ ♀) 4.7–6.3 mm.; width 1.75–2.3 mm. California (San Francisco and northward and Calaveras Co., and Nevada (Reno). [*"Dichirus" pallidus* Mots.]. **rugicollis** Lec.

Form and facies as in *rugicollis* in every way, except that the lustre is still duller and the elytra much shorter and broader; head similar; antennæ longer and more slender, blackish, paler basally; prothorax similar throughout, except that the rugulosity is more pronounced laterally and the basal angles are less narrowly rounded, the basal punctures also extend across the middle to some extent; elytra only a third longer than wide, nearly one-half wider than the prothorax, dull in lustre, the striæ more deeply impressed than in *rugicollis* and the scutellar stria longer, being as long as half the basal thoracic width; hind tarsi longer and more slender. Length (♂) 5.8 mm.; width 2.4 mm. Utah. The single type seems to be a male, judging by the conformation of the abdominal apex, but I can discover no squamæ on the anterior tarsi..... **latipennis** n. sp.

Infuscatus is so aberrant in the parallel, evenly rounded form of the prothorax and complete absence of the usual discal puncture of the elytra, form of the elytral striæ, deeper thoracic foveæ and scheme of coloration, that it might almost be considered generically different from the other species of the genus, but there is something about the general habitus which seems to show conclusively that its proper place is with *Agonoderus*. The characters of *maculatus* are taken from the original description; it seems to resemble *binotatus*, especially in the coloration of the head, but is much

larger, with longer scutellar stria and is from a very different faunal region.

There are before me two remarkable specimens; they are unusually slender and elongate; one is intense black throughout every part of the body and legs, antennæ and oral organs, the other is nearly black in the same way, but has the sides of the elytra faintly rufescent and the legs blackish rufo-piceous. They are so abnormal, in fact, that it has occurred to me to suspect the results of some pathologic condition in these specimens and I therefore leave them unnamed for the present, although in general outline they do not agree very well with any described species; they belong to the *comma* section of the genus and resemble *gracilitarsis* in general form more than any other; they were found unlabeled in the Levette collection, whence came also the types of *gracilitarsis*.

While there is a marked consistency of coloration and habitus running through the entire genus, there is no basis whatever in fact for the synonymy now given in our lists. The *pallipes* and *comma* sections are indeed remarkably different in details of structure, and *rugicollis* can be placed in neither of these sections with any degree of propriety. I do not think that the very pallid coloration of *pallescens* can be due entirely to immaturity, as there is no indication of this in shrinkage or distortion of the integuments; at the same time there are at hand two examples which I refer to *comma*, from the Adirondacks, that are fully as pallid in all their parts as the types of *pallescens*. *Rugicollis* Lec. and *pallidus* Mots. were both described in 1859, but I think *rugicollis* was the earlier.

Tribe CRATOCARINI.

In natural position this tribe evidently falls near the Acupalpini, as suggested by Bates, and it is far out of place among the Daptini, as shown by the structure of the labial palpi. The species are more diversified in size than in the Acupalpini, those of *Cratocara* being in fact of rather large size in the subfamily. Reasons were advanced in the first part of the present study for the adoption of *Cratocara* as the dominant genus of this tribe, leaving *Polpochila* Sol., out of consideration, owing to doubt concerning its affinities.

Two widely different genera alone compose the tribe so far as known, as follows:

Body large, oblong-oval, with notably large head and relatively very moderate eyes, the mandibles shorter, arcuate externally; pronotum not completely or feebly margined at base and with very broadly rounded basal angles; basal joints of the anterior tarsi obliquely and inferiorly prolonged at their apical angles. Sonoran regions. **Cratocara**

Body small and slender, parallel, the head large and with large and very prominent eyes, the mandibles longer and straighter; pronotum coarsely and very strongly beaded at base, the basal angles abruptly prominent and sharply defined; tarsi shorter and much more slender, the joints not modified at the angles. Neotropics from Panama to southern Texas..... **Pogonodaptus**

In both of these genera the mentum is strongly dentate and the tarsi are sexually unmodified.

Cratocara Lec.

Polpochila Horn, Bates nec Sol.; *Melanotus* Dej. nec Esch.

The body in this genus is of rather large size and robust outline, with glabrous, shining and rather thin or only moderately thick integuments. The head is notably large, the labrum sinuate medially, the epistoma sinuato-truncate, the long seta at each side at a considerable distance from the apex, and the eyes are moderate in size and prominence. The frontal foveæ are large and deep and are isolated, not connected with the posterior portion of the impression containing the supra-orbital seta and extending behind the eyes. Antennæ rather stout, moderately short and strongly compressed, Just above the eyes there is a fine straight carina extending from the supra-antennal angle to the post-ocular impression. Mentum large, with acute and prominent anterior angles, the emargination relatively small and shallow, the tooth large, sharply triangular, extending almost as far as the lobes; behind the tooth there are two long setæ and the support of the mentum bears at each end two very long setæ arranged transversely. The ligula is long, gradually rather strongly dilated at apex, with the usual two very long coarse setæ, the paraglossæ not very broad with their outer angle slightly produced, acute and curving inward. The labial palpi are long and slender, quite different from anything known in the preceding tribe; the second joint is very slender and elongated, bearing on the anterior edge, beyond the middle, two long and very stiff setæ, the terminal setæ

on the posterior side short; the third joint is slender, subparallel, obtusely truncate at tip and is barely three-fourths as long as the second joint. The maxillary palpi are long and very slender, the third joint much longer than the fourth, which is subcylindric and truncate at tip. The falciform inner lobe of the maxilla is very coarsely and closely fringed within and the outer lobe is long and slender, with the last joint feebly arcuate. The elytra have a long scutellar stria and a singe discal puncture and the lateral series of foveæ is broadly interrupted medially. The terminal spur of the anterior tibiæ is large, elongate and pointed, the spurs of the other tibiæ very slender. The abdomen is without accessory punctures of any kind and the last segment has two apical setæ in both sexes.

The only sexual differences that seem to be visible reside in the larger head of the male and the more acutely lobed apex of the last ventral segment in that sex. The species, omitting those confined to Mexico, are apparently three in number as follows:

Head about as wide as the prothorax. Piceous-black, shining; mandibles strongly rugose; prothorax not at all wider than the head across the eyes, "almost three times as wide as long," narrowed posteriorly, the hind angles extremely obtuse and broadly rounded, finely canaliculate, the sides rounded, narrowly margined; base broadly impressed and alutaceous at each side; elytra not at all wider than the prothorax, the striæ deep, impunctate; intervals almost flat; antennæ, palpi and legs rufo-testaceous. Length 14.2 mm. One example, taken on the "San Diego trip"—LeConte. Body parallel, the head barely perceptibly narrower than the prothorax, the latter not more than three-fourths wider than long, the sides converging behind, the hind angles obtuse but only moderately broadly rounded; elytra not at all wider than the prothorax, and nearly three times as long, parallel, with straight sides, evenly and circularly rounded at apex and with long scutellar stria. Length 17 mm. Mexico (Guanajuato and Oaxaca). —Description drawn from the published figure of *capitata* on plate III of the Biologia, Vol. I, pt. i. [*Melanotus capitatus* Chd.; *Melanotus erro* Lec.]..... **capitata** Chd.

Head much narrower than the prothorax in both sexes.....2

2—Form stout, oblong, subparallel, convex, shining, blackish-piceous throughout above, paler and more rufous beneath, the legs testaceous; head (♂) four-fifths or (♀) scarcely more than three-fourths as wide as the prothorax, rufescent anteriorly; mandibles flat and strongly rugose on their upper surface; eyes rather small, prominent; antennæ testaceous, extending slightly behind the thoracic base; mentum not transversely concave; prothorax twice as wide as long, widest near apical third, the sides strongly rounded anteriorly, rapidly converging and less rounded posteriorly, the hind angles extremely

broadly rounded and wholly obliterated; apex broadly, feebly sinuate, strongly beaded laterally, with rather well defined and subacute angles and very much wider than the base, which is feebly sinuate and unmargined medially, beaded about the hind angles and thence along the sides to the apex; surface smooth, narrowly reflexed at the sides, the gutter ending posteriorly at the flattened densely punctulate latero-basal surface; foveæ large, closely punctulate, gradually impressed to the rather punctiform bottom; fine punctures extending across the median part near the base; stria very fine, a little stronger basally; elytra but little more than two-fifths longer than wide, very slightly (♂) or distinctly (♀) wider than the prothorax, the sides parallel and broadly, feebly arcuate, circularly rounded in apical two-fifths, the sinus feeble but evident; striæ fine, feebly impressed, the scutellar long; intervals nearly flat, the discal puncture strong, at apical third; anterior tarsi stout, tapering from base to tip, the posterior rather stout, filiform, the spines of the articular apices long, forming a corona; first joint as long as the next two but much shorter than the fifth, which is swollen at apex, the claws rather long, moderately slender and strongly, evenly arcuate. Length (♂ ♀) 14.8–15.0 mm.; width 5.5–6.0 mm. Arizona (Willcox). Three examples..... **brunnea** n. sp.

Form less stout, more cuneiform, convex, shining, darker in color, the entire upper surface and lower surface of the head and prothorax black, the under surface of the hind body and the legs testaceous; head very moderate in size, barely three-fourths as wide as the prothorax, the eyes, mandibles and antennæ nearly as in the preceding; mentum transversely concave anteriorly, the concavity interrupted at the middle; prothorax twice as wide as long, nearly as in the preceding, except that the arcuate sides are more strongly converging posteriorly, the base feebly beaded entirely across the width, the surface near the very broadly rounded hind angles more reflexed and impunctate and the foveæ deep, more punctiform and impunctate, but with radiating rugæ, the apical angles more blunt; elytra nearly one-half longer than wide and fully a fifth wider than the prothorax, not parallel as in the two preceding but somewhat dilated behind the middle, the sinus rather broad, feeble though very evident, otherwise nearly as in *brunnea;* hind tarsi nearly similar. Length (♂) 12.5 mm.; width 5.2 mm. A single specimen received recently without label but supposed to be from Arizona..... **mentalis** n. sp.

The descriptions seem to agree in stating that the head in *capitata* is virtually as wide as the prothorax, which is said also by LeConte of his *erro*, but while the prothorax in *capitata*, as noted from the figure in the "Biologia," is not very transverse, not even twice as wide as long and with the basal angles not extremely rounded, this part in *erro* is said by LeConte to be nearly three times as wide as long—probably an exaggeration,—with the hind angles broadly rounded. It is rather more than possible, therefore, that *Cratocara*

erro of LeConte, is a species different from the true *capitata*, but it cannot be identical with either of those newly described above, because of its very much larger head. The fact that the two species *brunnea* and *mentalis* are mutually distinct, apparently beyond reasonable doubt, tends to show still further that neither can be the same as *erro*. There are doubtless a considerable number of species of *Cratocara* inhabiting the Sonoran regions of North America.*

Pogonodaptus Horn.

In this genus the size is small, somewhat as in *Tachycellus* or *Triliarthrus* but narrower and more parallel, the head with more elongate and smooth mandibles, the eyes relatively large and very prominent and the strong frontal foveæ are connected with the post-ocular oblique depression by a very fine incised line. The antennæ are stout and rather short, not so compressed as in *Cratocara*. The prothorax is very different in its prominent basal angles and strong thick basal bead, and the elytra differ in having no trace of scutellar stria, though the basal fovea is large and well developed; the lateral line of foveæ is medially interrupted and there is a distinct discal puncture. The hind tarsi are short and very slender, the joints not modified, and the anterior seem to be perfectly similar in the male and female. The abdomen is devoid of punctulation and has two apical setæ in both sexes, the last segment being more acutely rounded medially in the male than in the female. The mentum is large, with a relatively small shallow notch

* In a consignment of Harpalids kindly sent me very recently by Mr. Knaus, there are two examples, male and female, of the true *Melanotus erro* of LeConte, taken at San Bernardino Ranch, Cochise Co., Arizona, by Smyth, and I have now still further reason to believe that *erro* is a species distinct from *capitata*, the body being shorter, the prothorax much shorter and more transverse—between two and three times as wide as long,—with more basally converging sides and very broadly rounded basal angles. The color is deep black when mature and the integuments are thicker than in *brunnea*. The most remarkable fact disclosed by these most interesting specimens, is the very great sexual differences in the head, which are very much more pronounced than in *brunnea*. In the male, the head is very large, suborbicular, subequal in width to the prothorax, with rather long straight apically falcate mandibles, somewhat as in *Pogonodaptus* and relatively very small eyes, which are much less prominent than the part of the tempora immediately behind them. In the female the head is very much smaller, about two-thirds as wide as the prothorax, with smaller mandibles and with the actually still smaller eyes more convex and very much more prominent than any part of the tempora. The description of LeConte is evidently taken from the male alone.

as in the preceding genus, but the tooth is shorter, broader and much less developed, though sharply angulate and the surface behind the notch has a fine transverse carina; the setæ of the several pairs are similar but more widely separated. Ligula shorter, more slender and only feebly dilated at apex, the paraglossæ long, very slender, widely diverging from near the base of the ligula, which is wholly free for the greater part of its length. The labial palpi are long, the second joint very slender, bisetose anteriorly and only slightly longer than the third, which is broader than the second and somewhat inflated, narrowed, compressed and truncate apically. The maxillary palpi are much shorter than in *Cratocara* and quite different, being nearly as in the Acupalpids, the last joint a third longer than the third. The gently falciform inner lobe of the maxilla has an obtuse tooth internally beyond the middle and an inner fringe of very coarse, widely separated spines and the last joint of the outer lobe is moderately long and very gradually finely pointed.

There are but few species known at present and only one described; the two in my collection may be known by the following brief diagnoses:

Body oblong, subparallel, convex, shining, deep black, or when immature piceous, with rufescent suture; under surface black to paler, the legs pale testaceous; head very slightly narrower than the prothorax; antennæ rather stout, the joints short, piceous, the two basal joints paler, extending slightly behind the thoracic base; prothorax three-fifths wider than long, widest before the middle; sides strongly rounded anteriorly, converging and less arcuate basally, becoming rather abruptly sinuate for a short distance from the prominent and sharply defined angles; base arcuate at the sides, much narrower than the feebly sinuate apex, the apical angles obtuse but evident; surface smooth throughout, very finely reflexed at the sides, the stria fine but deep and distinct, entire; foveæ linear, narrow and deep, impunctate, extending to the deep groove defining the broad flat basal bead; elytra one-half longer than wide and a fourth wider than the prothorax, parallel and very feebly arcuate at the sides, rounded at apex, the sinus very feeble; striæ rather fine but impressed, coarser on the declivity; intervals feebly convex, the discal puncture strong, only a little behind the middle; legs rather short and slender, the anterior tarsi feebly swollen in both sexes, the posterior slender, filiform, two-thirds as long as the tibiæ, the first three joints decreasing uniformly and rather rapidly in length, the fifth almost as long as the preceding three. Length (♂ ♀) 5.0–5.8 mm.; width 1.65–1.9 mm. Texas (Brownsville). [*Polpochila mexicana* Bates; *Pog. piceus* Horn]..... **mexicanus** Bates

Body nearly as in the preceding but rather larger and more elongate, shining, piceous, the elytra rather paler; under surface pale piceo-rufous, the legs pale; head barely visibly narrower than the prothorax, the eyes very prominent; mandibles longer than in the preceding, the frontal foveæ larger and deeper, the oblique posterior part deeper and with longitudinal plicæ, the fine groove just above and along the eyes more evident; antennæ longer and more slender, extending well behind the thoracic base, fuscous, the two basal joints pale; prothorax as in *mexicanus* but with the sides posteriorly more oblique and less rounded and the flat basal bead more abruptly narrowed from the foveæ to the sides; elytra shorter, less than one-half longer than wide, about a fourth wider than the prothorax, the striæ rather less impressed, the sinus rather more evident, the discal puncture similar; hind tarsi nearly similar. Length (♀) 6.5 mm.; width 2.0 mm. Panama (Colon),—Beaumont..... ***impressiceps** n. sp.

That Mr. Bates should have assigned *mexicanus* to *Cratocara* (*Polpochila*), shows that he could not have given much attention to generic characters in the group and probably had not confirmed the supposed identity of *Cratocara* with the minute Chilean *Polpochila*. The synonymy of *piceus* given above is due to that author. The figure of the mouth parts of *Pogonodaptus* given by Horn (Tr. Am. Ent. Soc., 1881, Pl. IX) is inaccurate in several particulars and he evidently failed to observe the obtuse tooth on the inner margin of the inner maxillary lobe; the last joint of the labial palpi is relatively too short and the third joint of the maxillary palpi is too long, in the drawing.

IV—A REVIEW OF THE GENUS THYCE AND OF THE NORTH AMERICAN SPECIES OF POLYPHYLLA.

No systematic revision of *Thyce* Lec., has ever been published. Only two species were known to Dr. G. H. Horn—*palpalis* Horn and *carpenteri* Lec.—and these were both assigned in error to *Plectrodes* Horn. The American species of *Polyphylla* were last reviewed by Horn (Tr. Am. Ent. Soc., 1881, p. 73)* in a short article, but the forms then known were only about a fourth as numerous as the species and subspecies which now lie before me. The object of the present study is to attempt as orderly an exposition of all the available material in these two genera as may be possible. This material has been accumulating gradually from many sources through the past thirty years and is tolerably complete.

There are four Melolonthid genera, including the two mentioned above, which form a natural group in our fauna; they have 10-jointed antennæ, the last spiracle in the dorso-ventral suture and more or less unequally toothed tarsal claws and may be known among themselves as follows:

Abdominal segments (♂), excepting the last, closely connate and immobile.....2

Abdominal segments (♂) all perfectly free.....4

2—Antennal club 6 or 7-jointed, very long and outwardly recurved (♂), or short and straight (♀); last joint of the maxillary palpi small, slender, cylindroidal, nearly similar in the sexes, not excavated though generally narrowly flattened anteriorly in the male; elytral ornamentation vittate or tending thereto; ungual dentition but slightly unequal; abdominal segments, except the last, always connate in both sexes.....**Polyphylla**

Antennal club 3-jointed, last joint of the maxillary palpi differing greatly in the sexes, very much larger and deeply excavated in the male; ungual dentition decidedly unequal and dissimilar.....3

3—Antennal club (♂) long, outwardly recurved distally as in *Polyphylla*, the last two joints of the funicle lamellately prolonged anteriorly to some extent; elytral vestiture vittate in arrangement—also nearly as in that genus; female unknown.....**Dinacoma**

* This is a short paper of about three pages, drawn up very hastily and superficially and containing several misidentifications, as well as errors relating to habitat. The author has throughout used the word trisinuate in referring to the clypeus, instead of bisinuate, which was doubtless the term intended.

Antennal club (♂) smaller and straight, the last two joints of the funicle never anteriorly prolonged; elytral vestiture uniform in distribution; abdominal segments sometimes partially free in the female... **Thyce**

4—Antennal club, palpi and tarsal claws nearly as in *Thyce*, the elytral vestiture uniform in distribution, the habitus of the body very similar to that of *Thyce* throughout; female not at hand.. **Plectrodes**

Polyphylla ranges over nearly the entire northern hemisphere, while the last three genera of the table are confined to the more southern Pacific coast and Sonoran regions and differ among themselves in only one or two structural features, but these are so radical—in the nature of the antennal club of *Dinacoma marginata* Csy., and in the structure of the abdomen in the male of *Plectrodes pubescens* Horn,—that I do not think they can be united very appropriately. The tooth on the posterior claw in these three genera, instead of being slender and similar to that of the anterior claw as in *Polyphylla*, is broad and more or less unequally bifid.

Thyce Lec.

This genus is peculiar to the fauna of the extreme southwestern Sonoran regions, ascending along the Pacific coast at least to and nearly throughout Oregon, but it is most abundant and diversified in the coast regions of southern California. The species of *Thyce* are of moderately large size and are stout and subcylindric in build, the integuments clothed with more or less dense subsquamiform pubescence, which, as before stated, generally differs greatly in character in the two sexes. In fact sexual differences throughout the body are unusually, though very variably, accentuated in this genus and in some cases affect the entire habitus to such an extent that it may be impossible to associate the female with its proper male unless they are found together. In some species the male and female are almost similar in general habitus, but in such species as *fossiger*, *harfordi* and *blaisdelli*, they are very different and the females sometimes afford more decisive criteria for specific distinction than do the males. Owing however to the much greater rarity of the female and the entire absence of that sex in most of the species now known, the following table is based primarily upon the male alone, excepting only in the case of the large and distinct *crinicollis*, though the female will be described wherever known:

Anterior tibiæ tridentate, more strongly in the female than in the male 2

Anterior tibiæ without trace of any other than the apical oblique spur-like tooth; female not at hand but with bidentate anterior tibiæ according to Fall..... 13

2—First tooth of the anterior tibiæ very large, obliquely and arcuately triangular and strongly compressed from the tibial base; Rocky Mountains. Body rather more parallel and narrowly cylindric than usual, pale red-brown in color above and beneath, the reflexed thoracic margin and the head in part black; head densely punctate and with dense stiff yellowish hairs, the clypeus deeply concave, truncate at apex; last maxillary palpal joint half as long as the antennal club, deeply and narrowly excavated from base to apex; prothorax fully two-thirds wider than long, very convex, the sides deeply crenulate, obtusely angulate behind the middle; apex sinuate, nearly two-thirds as wide as the base, which is broadly lobed medially, the hind angles rounded; surface strongly, very densely punctate, broadly and feebly impressed along the median line, each puncture bearing a short decumbent yellowish squamiform hair; side margin notably reflexed near the anterior angles; mesonotum with long yellowish hair, the scutellum densely punctate, with a smooth median line, each puncture with a moderately stout hair; elytra nearly one-half longer than wide, only slightly wider than the prothorax, obliquely impressed at the sides behind the humeri, slightly rugulose and rather feebly, sparsely punctate throughout, each puncture with a minute stout suberect hair; pygidium rather narrowly rounded at apex, densely, feebly punctulate and with close-set decumbent slender squamules; under surface anteriorly with dense long yellowish-brown hair, the abdomen with small sparse decumbent squamules and long sparse erect hairs; middle tarsi much longer than the tibiæ; dentition of the tarsal claws rather less unequal than usual. Length (♂) 20.0–21.0 mm.; width 9.4–10.5 mm. Texas (El Paso),—Dunn. New Mexico (Albuquerque), LeConte..... **squamicollis** Lec.

First tooth more abruptly erect and acute, less compressed. Pacific coast regions..... 3

3—Middle tarsi shorter than the tibiæ; last palpal joint less than half as long as the antennal club..... 4

Middle tarsi longer than the tibiæ; last palpal joint much longer..... 5

4—Body stout, very convex, subcylindric, rather dull in lustre, pale red-brown in color throughout, with the usual long dense pubescence beneath, except on the abdomen; vestiture yellowish throughout; head blackish, strongly, densely punctate, with rather long thick dense decumbent and other sparser, very long, fine and erect, hairs; clypeus moderately concave, very finely and densely punctate and with very broadly rounded angles, the hairs whiter than those of the head, rather long but subsquamiform; last palpal joint less than half as long as the antennal club, plumper than in the preceding, with a very broadly oval deep excavation, extending from very near the base to apical fourth, the apex pointed; prothorax much wider than

long, the sides subparallel and nearly straight to the middle, there narrowly rounded and thence converging and nearly straight to the apex, finely and only very feebly serrulate; apex feebly sinuate, two-thirds as wide as the base, which is gradually very strongly lobed as usual, the hind angles obtuse but not evidently rounded, slightly blunt; surface finely, very closely punctate and densely clothed with rather long subdecumbent, basally slightly broadened hairs, with others long, sparser, finer and erect bristling throughout, the vestiture a little denser along the middle and broadly near the sides as usual; scutellum very densely, decumbently pubescent throughout; elytra two-fifths longer than wide and fully a third wider than the prothorax, finely, densely, subrugulosely punctate and with decumbent and rather long slender close-set stiff but scarcely at all squamiform hairs; lateral impression extending behind the middle; pygidium wider than long, narrowly rounded at apex, covered densely with small narrow squamules; hind tibial fringe long, the hind tarsi shorter than the tibiæ, first tooth of the anterior tibiæ very short and broadly obtuse. Length (♂) 20.5 mm.; width 9.7 mm. Mojave Desert..... **carpenteri** Lec.

Body rather shorter and less convex than in *carpenteri*, moderately shining, pale red-brown throughout, the vestiture yellowish; head rather strongly, densely punctate, and with long erect dense hairs throughout; clypeus with finer and well separated punctures, bearing short and stiff but rather sparse hairs, the angles obtuse but distinct, the parallel sides and the apex distinctly and subequally arcuate; last palpal joint narrower than in the preceding but not one-half as long as the antennal club, having a very deep excavation extending from near the base to apical fifth or sixth; prothorax nearly similar in form to the preceding but with the sides diverging and straight from base to behind the middle and converging and feebly arcuate from the submedian rounded angle to the apex, feebly serrulate, the basal angles obtuse but very distinct, not rounded; surface not very coarsely but deeply, closely punctate and with very long, fine, erect bristling hairs throughout; at the surface shorter stiffer and more decumbent but scarcely squamiform hairs are moderately closely distributed; scutellum with rather long shaggy hair throughout; elytra only a fourth longer than wide, nearly a third wider than the prothorax, more abruptly and transversely obtuse at apex than in *carpenteri*, the oblique lateral impression not extending behind the middle, feebly rugulose, the punctures fine and sparse, each with a moderately short and rather coarse hair, the hairs well separated, not quite decumbent, a little longer but only slightly more close-set along the suture; pygidium wider than long, narrowly parabolic at tip, not densely clothed with short stiff hairs; abdomen with similar but closer hairs; first tooth of the anterior tibiæ short and broadly obtuse. Length (♂) 17.5–20.0 mm.; width 9.0–10.0 mm. California (Los Angeles),—J. J. Rivers..... **riversi** Csy.

Body in the female much larger than the male of *riversi* and with closer vestiture, pale and feebly shining reddish-brown in color throughout; head densely clothed with long, suberect yellowish hairs, the tumor

of the vertex unusually feeble; clypeus short, with close-set punctures, each bearing a moderate, slender, decumbent hair; antennal club short, oval, about half as long as the stem; last palpal joint very small, much less than half as long as the club, oval, gradually pointed, the small opaque excavation oval, not extending to apical third; prothorax rather small but of the usual form, the sides parallel in basal half, the punctures moderate in size, deep and very close-set throughout, the erect hairs everywhere long and very numerous, brownish and densely herissate, this being a conspicuous feature; short decumbent hairs whitish and moderately numerous; scutellum densely clothed with long decumbent fine and paler yellowish hairs and without squamules of any sort; elytra large, a third longer than wide, widest behind the middle, broadly, obtusely rounded in apical third, one-half wider than the prothorax, clothed throughout with very small slender whitish hairs, which are twice as close as the longer hairs of *riversi* and dense along the suture; pygidium with dense minute whitish hairs of the same sort, concealing the integument except laterally, and almost wanting narrowly around the apex, the fine whitish hairs rather sparse on the abdomen medially; all the segments closely connate, except the last; long shaggy hairs beneath brownish, very dense and conspicuous. Length (♀) 23.0–23.5 mm.; width 11.7–12.0 mm. California (Los Angeles Co.). Two specimens received from a different source from those of *riversi*.

crinicollis n. sp.

Body stout, pyriform, strongly convex, pale red-brown, feebly shining, the vestiture white or very nearly so throughout; head with rather long, coarse and very dense hairs, with others sparse, fine, long and erect; clypeus concave, finely, very densely punctate, with dense and rather more squamiform decumbent hairs, the angles rounded, the apex broadly arcuate; last palpal joint much less than half as long as the antennal club, not very stout, gradually and somewhat obliquely acute at apex, with a very deep irregularly oval excavation from near the base to barely beyond apical third; prothorax one-half wider than the median length, of peculiar form, trapezoidal, the sides converging from base to apex and with only a trace of the medial angulation, serrulate basally, even apically, the base strongly lobed, with the angles nearly right, slightly rounded; apex feebly sinuate; surface finely and closely but not confluently punctate, with dense narrowly subsquamiform decumbent hairs and many erect finer bristling hairs, the vestiture a little denser broadly parallel with the sides; scutellum extremely densely, coarsely and decumbently pubescent throughout; elytra a fourth longer than wide, fully one-half wider than the prothorax, widest slightly behind the middle, thence broadly, subcircularly rounded behind, each with three very broad feeble ridges, very finely, feebly and densely punctulate throughout and with rather short and moderately coarse, close-set hairs, dense along the suture; pygidium much wider than long, narrowly parabolic apically, densely clothed with short and stout but scarcely squamiform decumbent hairs, the abdomen similarly but not quite so densely clothed; hind tarsi three-fourths as long as the tibiæ; first tooth

of the anterior tibiæ short and obtuse though angulate. Length (♂) 18.0 mm.; width 10.0 mm. California (Los Angeles).

pistoria Csy.

5—Last palpal joint not as long as the antennal club, though much more than half as long; abdominal segments (♀), except the last, closely connate.....6

Last palpal joint distinctly longer than the antennal club; abdominal segments (♀) partially free.....11

6—Pygidium broadly, subcircularly rounded at apex. Form stout, convex and subcylindric, slightly shining, pale red-brown, the head and prothorax darker; vestiture pale ochreous-yellow; head with very dense decumbent coarse hairs, more squamiform near the eyes, the erect bristling hairs numerous; clypeus concave, finely, densely punctate, densely clothed with rather long, decumbent and feebly subsquamiform hairs, the angles obtuse though rather distinct, the apex feebly arcuate, slightly sinuate medially; last palpal joint five-sixths as long as the antennal club, with a very deep excavation virtually throughout the length and very narrow apically, expanding slightly basally; prothorax transverse as usual, the sides feebly diverging and rather coarsely crenulate nearly to the middle, there rather broadly rounded and thence converging and more feebly serrulate to the feebly sinuate apex; base strongly lobed as usual, the angles obtuse and distinctly rounded; surface not very finely, closely but not confluently, deeply punctate, closely clothed with coarse and decumbent but scarcely squamiform hairs, the erect finer hairs unusually short, the vestiture obscurely trivittate; scutellum densely clothed throughout with decumbent hairs, which are more squamiform than those of the prothorax; elytra with the lateral impression broad and shallow, extending slightly behind the middle, a third longer than wide, a little more than a fourth wider than the prothorax, finely, rather densely, subrugulosely punctate and with short and rather dense, coarse and decumbent but scarcely squamiform hairs, a little closer narrowly along the suture; pygidium somewhat small, but little wider than long, very densely clothed with short decumbent and narrowly squamiform hairs, the abdomen with less dense and less squamiform hairs, which however become very dense along the sides; hind tarsi about as long as the tibiæ; first tooth of the anterior tibiæ acute and erect. Length (♂) 21.0 mm.; width 9.6 mm. California (Los Angeles Co.). A single example...**rotundicauda** n. sp.

Pygidium angulate apically, the angle more or less rounded or narrowly parabolic.....7

7—Elytral vestiture consisting of rather long, decumbent, very dense coarse hairs, each hair feebly inflated basally and drawn out into a long fine point distally. Body stout, convex, subcylindric, the dense vestiture whitish, with only very pale yellowish tinge; head and clypeus nearly as in the preceding, except that the clypeus is broadly rounded laterally and around the angles, the apex feebly arcuate; last palpal joint stouter and shorter, nearly as in *blaisdelli*, three-fourths as long as the antennal club, the excavation very deep, extending throughout the length and moderately narrow, scarcely

broader basally; prothorax throughout as in the preceding but a little smaller and rather more transverse, the punctures still stronger, very close-set, the vestiture nearly similar, the scutellum similarly clothed; elytra much shorter, barely a fourth longer than wide, fully two-fifths wider than the prothorax, rather more rounded at the sides, the oblique lateral impression distinct, the humeral umbo strong; surface scarcely at all rugulose, unusually finely, densely punctate, more closely and finely than in the preceding; pygidium more convex and transverse, distinctly wider than long, the vestiture dense and dual, wholly decumbent, consisting of short hairs, some of which are narrowly squamiform, and others very slender, also with some longer and more erect hairs; abdomen rather densely clothed throughout with a somewhat similar combination of hairs; hind tarsi slightly shorter than the tibiæ; first tooth of the anterior tibiæ broad and obtuse in the type, which however shows the effects of long use. Length (♂) 20.5 mm.; width 9.6 mm. California (Los Angeles Co.).

vestita n. sp.

Elytral vestiture always very short, more or less dense, generally slightly squamiform 8

8—Body shorter and stouter in form, the elytra a fourth to third longer than wide and much wider than the prothorax in both sexes. 9

Body more elongate and cylindric, the elytra fully two-fifths longer than wide and less exceeding the prothorax in width in both sexes. . . . 10

9—Vestiture notably coarse, pale tawny-yellow in color; integuments red-brown, slightly shining, the humeral umbo blackish; head and concave clypeus equally and very densely clothed with decumbent and coarse, basally somewhat dilated hairs, interspersed with long fine erect hairs, the clypeus with rounded angles, the apex sometimes feebly sinuate medially; last palpal joint only three-fourths as long as the antennal club, broadly oval, with a broad and very deep excavation, extending throughout the length; prothorax of the usual form, obtusely angulate at the sides and slightly widest at the middle, the margins barely at all crenulate, the basal angles obtuse, rather variable, not distinctly to rather decidedly rounded; punctures strong, deep and dense, the vestiture rather dense, the decumbent hairs rather long, inflated basally, the long erect hairs moderately numerous, the usual narrow median line and broad lateral condensations visible; scutellum with very dense vestiture, still coarser than that of the pronotum; elytra with rather arcuate sides and gradually obtuse apex, two-fifths wider than the prothorax, the decumbent vestiture moderately dense and consisting of very slender, gradually pointed scales, the general surface coarsely but feebly, irregularly rugulose and with moderate and well separated punctures; pygidium slightly transverse, triangular as usual, the dense vestiture still coarser than that of the elytra, that of the abdomen nearly similar but white; first anterior tibial tooth strong and pointed. Length 18.0–23.0 mm.; width 9.0–11.0 mm. Ten examples.

Female nearly similar to the male in general size and outline, though a trifle more elongate, much more shining, brighter testaceous, the humeral umbo not darker, the head with very fine decumbent hairs,

not concealing the sculpture, the clypeus shorter, more rounded at the sides and angles, the vertex tubercularly elevated medially, the antennal club very much shorter, oval, the last palpal joint small, oval, pointed, two-thirds as long as the club and with a deep excavation extending from base to apical fifth; prothorax nearly similar in form but smaller in size, with nearly similar close-set punctures but entirely clothed loosely with long fine erect hairs, the decumbent hairs extremely short, fine and inconspicuous; scutellum with coarser decumbent and erect pubescence than the pronotum; elytra widest at the middle, nearly three-fifths wider than the prothorax, almost similar in the sparse rugulose sculpture and punctulation, but with the decumbent hairs slender, fuscous and minute, not in the least concealing the integument, the pygidium and abdomen with minute, stouter, closer and whiter decumbent hairs than the elytra; anterior tibiæ more strongly tridentate than in the male as usual; middle and hind tarsi much shorter, the claws smaller, subsimilarly but less strongly toothed. Length 20.0–22.0 mm.; width 10.0–10.7 mm. Two examples.

California (San Diego)..... **blaisdelli** Csy.

A—Female nearly similar to the female of *blaisdelli* but larger and broader in form, almost exactly similar in coloration, lustre and very minute sparse vestiture, which is however everywhere still more minute; median elevation of the vertex larger and stronger; antennal club a little longer and narrower; the last palpal joint narrower, straighter at the sides, gradually pointed almost from the base, three-fourths as long as the club, with short bristling hairs throughout, which are twice as numerous as in *blaisdelli*, the excavation extending from base to apical fourth, gradually attenuated; prothorax larger and broader, with nearly similar irregularly distributed punctures and still shorter minute vestiture and erect hairs, the more sparsely punctate area near the sides behind the middle even more developed; elytra broader, rather less rugulose, the decumbent hairs still more minute and inconspicuous; other characters nearly similar. Length 26.0 mm.; width 12.0 mm. California (Los Angeles Co.). . **nitidula** n. subsp.

Vestiture finer and closer, very dense, whitish in color; integuments more obscure red-brown, the head and prothorax dark brown; head and clypeus nearly as in the preceding and almost similarly clothed; last palpal joint rather narrow and elongate, fully four-fifths as long as the antennal club, the very deep excavation narrow and extending its entire length, the acute apex slightly bent downward as usual; prothorax of the usual transverse form and outline, the slightly converging sides behind the middle unusually coarsely crenulate, the hind angles rounded; surface strongly, densely punctate, the prostrate hairs thickened, with the usual three condensations, the erect hairs numerous and rather long; scutellum very densely, decumbently squamulo-pubescent; elytra oblong, rapidly obtuse at apex, a fourth longer than wide and not quite one-half wider than the prothorax, the very short decumbent subsquamiform pubescence very dense, still denser along the suture, the lateral impression

bordered below by a distinct obtuse ridge, between which and the sides the pubescence is sparser; pygidium rather transverse, obtusely triangular, the very dense decumbent hairs rather less coarse than than those of the elytra, subsimilar to those of the abdomen but denser; tibiæ as in the preceding. Length 19.0–20.0 mm.; width 9.0–9.8 mm. Four examples.

Female differing greatly from the female of *blaisdelli*, much stouter, more oval, rather shining but with less minute and closer vestiture; head with rather dense coarse prostrate, and some long erect, hairs, the clypeus very short, rounded at the sides and angles, the punctures stronger and more separated than those of the front, the prostrate hairs rather sparse; medial tumidity of the vertex—obsolete in the male of this as well as *blaisdelli*—not so strong as in the preceding; antennal club short and broadly oval, the last palpal joint very small, not half as long as the club, oval, obtusely pointed, glabrous and with a shallow excavation extending only a little beyond the middle of the length; prothorax nearly similar in outline but more developed than in the male, the punctures not quite so large and dense throughout, the long erect vestiture very abundant, the shorter semi-erect hairs distinct but sparse; scutellum densely but finely pubescent; elytra much larger and broader, the subdecumbent hairs fine and numerous but much less dense than in the male; pygidium very much larger and still more transverse, the short fine hairs rather dense as on the abdomen; general color of the body much paler red-brown than in the male. Length 20.5–21.0 mm.; width 11.0–11.4 mm. Two examples.

California (Los Angeles Co.).....**fossiger** Csy.

A—Male similar to the male of *fossiger* in almost every way, except that the vestiture is pale yellowish and even denser and that the last palpal joint is shorter, with more broadly open excavation and only about three-frouths as long as the antennal club; the hind tarsi are much shorter, being very much shorter than the tibiæ; in *fossiger* they are only a little shorter than the tibiæ and are thicker. Length 18.5 mm.; width 9.4 mm. California (Los Angeles Co.). One example.....**brevitarsis** n. subsp.

B—Male similar to the male of *fossiger* in size and general form, but with the pubescence, which is everywhere similarly dense, of a deep ochreous-yellow color; last palpal joint shorter than *fossiger*, nearly as in *brevitarsis*, but more hairy than in any of the other allied forms; hind tarsi much shorter than the tibiæ; pygidium smaller, more convex and rather less transverse than in any of the others. Length 19.5 mm.; width 9.8 mm. California (Los Angeles Co.). One specimen.....**ochreata** n. subsp.

C—Male nearly as in the male of *fossiger* but with a relatively larger prothorax and with the last palpal joint obviously different, being shorter and more broadly oval and not more than three-fourths as long as the antennal club, the excavation broader and not partially closed by the overhanging walls beyond the middle as it is in *fossiger;* pygidium and tarsi nearly similar. Length

20.0–20.5 mm.; width 9.8–10.0 mm. California (Los Angeles Co.). Two examples. . . . . **aperta** n. subsp.

*10—Body slender, cylindric, feebly shining through the close vestiture, which is pale yellowish in color; head much shorter and more transverse than in any of the four preceding, the deeply concave clypeus with longer, less coarse, extremely dense and more silky vestiture, the covering of the vertex nearly similar; last palpal joint almost as in *fossiger* but not quite so long, the narrow and very deep excavation tending more to closure by the overhanging walls of the excavation—a variable character however,—the outer surface coarsely rugose; prothorax as in *fossiger* throughout but with more broadly rounded basal angles; elytra narrower, fully two-fifths longer than wide and barely a third wider than the prothorax, otherwise nearly as in *fossiger*, except that the punctulation is a little finer and the dense vestiture more yellowish and a little longer; pygidium narrower and more convex, with the dense vestiture perceptibly longer, scarcely wider than long; abdomen, tibiæ and tarsi nearly as in *fossiger*. Length 18.5 mm.; width 8.6 mm. California (Los Angeles Co.). A single male example. . . . . **angustula** n. sp.

Body long and subcylindric but much larger than in *angustula*, the dense vestiture finer and shorter, whitish in color; integuments piceous-brown, the hind femora blackish; head with dense coarse decumbent vestiture and the usual long erect hairs, the vertex feebly elevated medially; clypeus very deeply concave, with very obtuse or nearly rounded angles, the punctures rather separated, the vestiture of long, apically very slender and basally stouter hairs, rather sparse; last palpal joint rather stout, fully three-fourths as long as the antennal club, the very deep entire fossa broad basally, narrow at apex; prothorax of the usual form but with the lateral angle at the middle almost obliterated and broadly rounded, the sides serrato-crenulate in about basal half, the basal angles obtuse and scarcely at all rounded; base more angulate than usual; surface strongly convex, in sculpture and vestiture nearly as in *fossiger* but with all the hairs, decumbent and erect, rather shorter, the relative size much larger; scutellum nearly similar, densely albido-pubescent, the hairs not quite so squamiform as in *fossiger;* elytra more elongate but otherwise similar, except that the dense whitish vestiture is a little finer and shorter, so that the obscure red-brown ground color is more visible, two-fifths longer than wide; pygidium similar but relatively somewhat larger; abdomen, tibiæ and tarsi nearly as in *fossiger*. Length 21.0–21.5 mm.; width 9.8–10.0 mm. Three examples.

Female differing altogether from the female of *blaisdelli* and *fossiger*, elongate, cylindric in form, nearly as in the male; head and clypeus finely, densely punctate and sparsely clothed with very small slender hairs, the median tumor of the vertex distinct; antennal club small, moderately stout; last palpal joint slender, much narrower than the preceding joints, three-fifths as long as the club, gradually sharply pointed, with a very narrow deep excavation extending from the base beyond apical third; prothorax throughout as in the female of *blaisdelli* but much larger, the erect hairs shorter and less conspicu-

ous, the small sparse slender decumbent hairs more distinct; scutellum much more finely and densely punctate than in *blaisdelli*, with finer shorter sparser and more decumbent vestiture; elytra in form nearly as in the male, rather more than two-fifths longer than wide and barely more than a fourth wider than the prothorax, rugose and closely, not very finely, irregularly punctate, the decumbent hairs very small and slender, being much smaller than in *fossiger* but decidedly less minute than in *blaisdelli*, scarcely at all concealing the integument; pygidium but little wider than long, strongly convex, with small decumbent and rather close-set hairs, producing a densely pruinose effect, those of the abdomen less minute and, along the sides, long, dense and decumbent, the intermixed erect hairs everywhere evident on the abdomen. Length 22.0 mm.; width 10.7 mm. One specimen.

California (Los Angeles Co.)..... **pulverea** Csy.

11—Elytral vestiture more hair-like than squamiform. Body rather large in size, subcylindric, dark umber-brown in color; vestiture yellowish-cinereous, rather dense; head with dense coarse decumbent, and finer erect, hairs, those on the clypeus longer; vertex more or less tumid medially; clypeus with obtuse but subprominent angles; last palpal joint parallel, nearly a third longer than the antennal club, which is not quite so elongate as in the preceding forms, the very deep entire excavation perfectly parallel throughout; prothorax of the usual form, convex, with rounded basal angles, the punctures rather coarse and well separated, becoming less coarse and gradually closer basally; vestiture of long erect shaggy, and shorter, more decumbent and subsquamiform, hairs, nowhere very dense; apex not quite half as wide as the base; elytra a third longer than wide and a fourth wider than the prothorax, parallel, rapidly very obtuse at apex, the surface rather finely, subrugulosely and not densely punctate, the decumbent hairs as long as the basal thickness of the antennal funicle, sharply pointed and seven or eight times as long as wide; pygidium transversely, obtusely triangular, with similar but finer close-set decumbent vestiture as on the abdomen; first tooth of the anterior tibiæ larger and more obtuse than the second; hind tarsi equal in length to the tibiæ. Length 21.0–21.5 mm.; with 10.0–10.5 mm. Two examples.

Female cylindrical, nearly as in the male but rather more elongate, with finer and less dense vestiture, cinereous-white in color; head relatively smaller, with coarse close distinct punctures and a large tumidity on the vertex, the decumbent pubescence rather fine and sparse, the front and vertex with many long hairs in addition; last palpal joint three-fifths as long as the short oval antennal club, narrowly triangular, its narrow and gradually attenuated excavation extending from near the base to apical fifth; prothorax almost exactly as in the male in form, size and sculpture, though rather broader, the erect vestiture similarly bristling and conspicuous, the short hairs suberect, sparse and extremely fine; elytra two-fifths longer than wide, barely a fourth wider than the prothorax, the sculpture similar but finer and sparser, the decumbent hairs small, very slender and

more separated, producing a strong dense bloom, the pygidium similar in form, only very feebly convex and clothed nearly like the elytra; hind tibiæ much more dilated at apex than in the male, as usual in the genus, and much longer than the tarsi. Length 21.8 mm.; width 10.8 mm. One specimen.

California (Shasta) and Oregon (Clackamas Co.). . **longipalpis** n. sp.

Elytral vestiture squamiform. 12

12—Body moderate in size and stoutness, smaller and less cylindric than the preceding, the vestiture very dense and cinereous-white; integuments dark brown in color, the prothorax frequently rufescent; head and concave clypeus densely clothed with coarse decumbent hair, the long erect hairs dense and very conspicuous; last palpal joint nearly one-half longer than the antennal club, which is unusually small, the excavation entire, very deep and more or less open; prothorax of the usual form, the sides generally coarsely crenulate throughout, the basal angles obtuse, though only narrowly rounded, and the side margins at base unusually reflexed; punctures strong, irregularly close-set throughout, more so basally than apically; vestiture with the usual medial and lateral condensations, the decumbent hairs slender but evidently squamiform, sparse, the erect hairs long and numerous; scutellar vestiture dense and elongate-squamiform; elytra a third to two-fifths longer than wide, two-fifths wider than the prothorax, not so abruptly rounded and obtuse at apex as in the preceding, the coarse dense decumbent squamules gradually pointed and four or five times as long as wide; pygidium densely clothed with slightly narrower squamules, the abdomen still less conspicuously clothed, though densely at the sides of each segment; hind tarsi not quite as long as the tibiæ. Length 18.0–20.0 mm.; width 8.3–9.7 mm. Ten examples.

Female larger and more elongate-cylindric than the male, castaneous, the vestiture finer and less dense though very distinct; head with slightly separated punctures and very fine, small, sparse decumbent hairs, the erect hairs rather short and inconspicuous, wanting on the clypeus, which is very short and concave; tumor of the vertex large and very conspicuous; antennal club small, broadly oval, the last palpal joint slender, two-thirds as long as the club, the narrow excavation extending from basal to apical sixth; prothorax relatively larger and broader than in the male, otherwise nearly similar, except that the basal angles are rounded and the margin basally not or scarcely reflexed; punctures rather coarse, irregularly close-set, the long erect hairs numerous but not dense, the decumbent hairs short, fine and sparse; scutellum with dense short squamuliform vestiture; elytra somewhat as in the male but longer and about a fourth wider than the prothorax, rugulose, sparsely, finely, irregularly punctate, the prostrate hairs short, fine and only moderately close-set, closer apically, along the suture and on the pygidium. Length 20.0–21.0 mm.; width 9.5–10.0 mm. Four examples.

California (near San Francisco). Three males sent by Mr. Leng are labeled San Diego; they do not differ materially, though ap-

parently a little more elongate, with slightly more developed antennal club and tarsal claws.....**harfordi** Csy.

A—Male similar to *harfordi* in general habitus and structure but smaller in size and with the decumbent elytral hairs narrower, less squamiform and decidedly sparser; last palpal joint a little smaller, a third longer than the antennal club; prothorax nearly similar throughout; scutellum more sparsely punctured and squamulose; elytra a little shorter, much less closely punctate and pubescent, the squamules about six times as long as wide; pygidium more finely but almost as densely pubescent, more convex than in *harfordi;* tarsi more slender, the posterior much shorter, the claws smaller. Length (♂) 17.0 mm.; width 8.4 mm. California (Alameda Co.),—Fuchs. One specimen.....**nanella** n. subsp.

Body somewhat larger, notably stouter, especially in the female, the vestiture more yellowish and more broadly squamiform; head similarly densely clothed; antennal club rather more elongate than in *harfordi,* the last palpal joint slender, with a very deep narrow and entire excavation and a third longer than the club; prothorax nearly as in *harfordi* but much less angulate at the sides medially, the margin strongly serrato-crenulate throughout, slightly more reflexed basally, the angles not very broadly rounded, strongly and closely punctate, the vestiture moderately dense, of long decumbent and gradually attenuate scales and sparser erect hairs, the scutellum with dense scales like those of the pronotum; elytra longer than in *harfordi,* two-fifths wider than the prothorax, very densely clothed with apically attenuate decumbent scales, which are about four times as long as wide, the surface moderately punctato-rugulose; pygidium densely clothed with slightly narrower scales, triangular, convex; abdomen closely subsquamulose; hind tarsi not quite as long as the tibiæ. Length 20.7 mm.; width 9.4 mm. One specimen.

Female differing greatly from the female of *harfordi,* being much stouter and much larger than the male, blackish-castaneous, rather shining; head not densely punctate and rather sparsely clothed with moderately stout decumbent, and moderately long erect, hairs, the umbo of the vertex strongly elevated and conspicuous; last palpal joint scarcely more than half as long as the oval stout antennal club, the excavation narrow, extending from near the base to apical fifth; prothorax nearly as in the male but larger, with rather more angulate sides and more broadly rounded basal angles, having similar strong and irregularly close-set punctures, the decumbent hairs sparser and thin, the erect long and rather more numerous; scutellum densely squamulose; elytra only a fourth longer than wide and fully two-fifths wider than the prothorax, the scattered decumbent hairs short and fine, closer apically and along the suture; pygidium more closely pruinose with similar small hairs; tarsi very short. Length 23.0 mm.; width 11.5 mm. One specimen.

California (San Luis Obispo Co.).....**squamosa** Csy.

13—Thoracic punctures notably sparse. Body rather stout, shining, blackish, the elytra somewhat paler, the decumbent vestiture moderately dense, squamiform, white to ochreous in color; head and

concave clypeus densely clothed with long, apically attenuate scales, intermingled with moderate erect hairs; antennal club long, almost as long as the entire stem; last palpal joint elongate-oval, with a broad to moderately narrow, deep entire excavation and about three-fourths as long as the club; prothorax nearly one-half wider than the median length, the sides parallel in basal, converging in apical, half, coarsely crenulate in basal half, rather reflexed basally, the angles rounded; surface very shining, the punctures moderately coarse, shallow and widely separated, a little closer but not at all dense in the impressed median line; scales long, attenuate, sparse, broadly closer laterally, without erect hairs except medially toward apex and along the sides; scutellum densely squamulose; elytra rather closely and moderately strongly punctato-rugulose, the scales well separated, closer laterally, apically and along the suture, three to nearly four times as long as wide; pygidium obtusely triangular, convex, densely squamulose, the scales smaller and narrower than those of the elytra; abdomen closely albido-squamulose; hind tarsi slightly shorter than the tibiæ. Length 19.5–20.5 mm.; width 9.0–10.0 mm. Three examples.

Female a little broader posteriorly than in the male, the vestiture sparser, the clypeus smaller, with the angles rounded as usual; head posteriorly obtusely tumid; antennal club much shorter; last palpal joint half as long as the club; front tibiæ strongly bidentate; tarsi and claws shorter and smaller. [After Fall, this sex not being represented among my material.]

California (about 50 miles to the eastward of San Diego),—Rick-secker..... **fieldi** Fall

Thoracic punctures irregular in distribution as usual but for the most part close-set to dense..... 14

14—Form stout, with more transverse prothorax than in *fieldi* and of slightly larger size, pale red-brown in color throughout, moderately shining, the decumbent squamiform vestiture rather dense and pale yellowish-white; head in form and vestiture nearly as in *fieldi;* antennal club long, not quite as long as the stem, the maxillary palpi missing in the type; prothorax fully one-half wider than long, formed otherwise nearly as in the preceding, the punctures smaller, deeper, much denser, separated generally by from half to twice their diameters and coalescent broadly along the depressed median line, the scales and erect hairs nearly as in *fieldi;* scutellum densely squamulose, the punctures denser than in the preceding; elytra broader, about a third longer than wide, fully two-fifths wider than the prothorax, more closely punctato-rugulose than in *fieldi,* the scales a little shorter, broader and everywhere denser; pygidium a little larger and broader, more obtusely rounded at apex and with smaller but similarly dense squamules; legs nearly similar. Length 22.0 mm.; width 10.1 mm. California. A single rather mutilated example given me many years ago by the late J. J. Rivers, the label reading simply "Southern California"..... **simplicipes** n. sp.

Form stout but with the anterior parts relatively much smaller, red-brown, the head and prothorax piceous-black; vestiture dense, pale ochreous-

yellow and squamiform; head as usual in form, clothed throughout very densely with rather long coarse hairs, the erect hairs comparatively few; antennal club as in the two preceding, the last palpal joint broadly oval, nearly three-fourths as long as the club, with an excavation which is more broadly oval than in any other species, occupying the entire side of the joint, leaving an even ambient rim, which is exactly equal in thickness throughout the periphery, the excavation opaque, the rim rather shining; prothorax relatively smaller than in any other species, barely a third wider than the median length, the sides parallel and crenulate in basal, converging and even in apical, half, the angles very obtuse and rather rounded; apex feebly sinuate, rather more than half the basal width, the basal lobe subtruncate; surface with rather coarse, strong and close-set punctures, the more densely clothed and punctate median impression ending just behind the middle; squamules gradually pointed and elongate, close-set laterally and in the median impression, well separated elsewhere; erect hairs sparse, rather short, only visible along the sides and medially toward tip; scutellum extremely densely squamose, the scales forming a more compact crust than in either of the preceding; elytra fully a third longer than wide and at least two-thirds wider than the prothorax, obtusely rounding in apical third, finely, irregularly and closely punctate and rugulose, the scales very dense and three times as long as wide along the suture, elsewhere close and three to four times as long as wide, in mutual contact at some points, as behind the humeral umbones; pygidium and abdomen with dense and rather smaller and shorter scales; apical tooth of the anterior tibiæ very acute, gradually feebly reflexed; hind tarsi three-fourths as long as the tibiæ. Length 21.5 mm.; width 10.0 mm. California (Sta. Barbara Co.). One example, probably received from Mr. Harford . . . . . **angusticollis** n. sp.

The species identified above as *squamicollis* Lec., agrees tolerably well with the original description; in the unique female type the prothorax is said to be covered with small narrow scales like those of the head. The dense covering of moderately long decumbent thick hairs in the male, as noted in my male representatives of *squamicollis*, are, as a rule, replaced by a much thinner vestiture of still smaller hairs or squamules in the female; so possibly my *squamicollis* Lec., may not be absolutely conspecific.

In the type of *pistoria*, the middle tarsi are in part missing, but I infer that when perfect they are shorter than the tibiæ, because of the unusual brevity of the hind tarsi and because the short middle tarsus is a character that seems to be coordinate with the more feebly developed last joint of the maxillary palpi, in which *pistoria* agrees with *riversi* and *carpenteri*.

At first it seemed probable that the types of *crinicollis* might

represent the female of *riversi*, as the coloration and hairy vestiture are almost similar, but on consideration of the facts that the vestiture of the female in all known instances is sparser than that of the male and that in the female types of *crinicollis* the vestiture is much closer than in the male types of *riversi*, it is almost certain that the two cannot be specifically identical or even closely related.

The only species not included in the above table is the *Plectrodes palpalis* of Horn; its characters, as derived from published statements, are as follows:

Thyce palpalis Horn (*Plectrodes*),—Brownish above, piceous beneath, moderately densely clothed with cinereous pubescence, short and recumbent on the elytra, longer and semi-erect on the head and prothorax; body beneath with long silken hairs, the abdomen with short recumbent pubescence; clypeus very distinctly narrowed at base, the angles rounded, the apical margin truncate and reflexed; prothorax broader than long, narrowed in front, the sides moderately arcuate; surface coarsely and moderately densely punctate; elytra densely punctulate, vaguely costate; pygidium sparsely pubescent, as on the elytra; legs fimbriate with moderately long hair; middle tarsi distinctly longer than the tibiæ; tarsal claws unequally toothed throughout, especially the anterior; last joint of the maxillary palpi oval, subacute at tip, three-fourths as long as the antennal club, with deep entire excavation. Length 20 mm. California,—Fuchs.

Although this species probably belongs near *fossiger* of the above table, the sparse vestiture of the pygidium and elytra and the failure to note any depressed scale-like hairs among the erect hairs of the pronotum, renders it impossible to identify it with any species known to me. The locality may be widely different from that of *fossiger* and allies.

The fact that in certain females, as for instance that of *harfordi*, the abdominal segments tend toward freedom, being rigidly connate along the middle only, may cast a doubt upon the validity of *Plectrodes*, where they are free in the male, as also probably in the female. In all other features *Plectrodes pubescens* is a true *Thyce*, and it is rather singular that no mention of *Thyce* was made by Dr. Horn in defining his genus *Plectrodes*.

In the type of *angusticollis*, the copulatory spicule is protruded; it consists of two approximate similar vertical plates, rounded at tip, convex on their outer surfaces and obliquely anteriorly hamate beneath; the basal part, anterior to the inferiorly hamate dilated apical part, is abruptly narrowed to a rather slender rod, where it

disappears within the abdomen. This is the most perfect arrangement for maintaining an unbreakable hold during copulation; the penis proper is then protruded between the reversely hooked plates.

Polyphylla Harris.

The species of this genus are rather sparingly diffused throughout the northern hemisphere, but are especially abundant in the western parts of the nearctic regions. There is considerable diversification in habitus but not so much in structural features of an essentially generic nature, and the name *Macronoxia*, proposed for certain species by Crotch, probably cannot be maintained. The sexes differ in appearance far less here than in *Thyce;* the disposition of the vestiture is virtually the same in male and female and the sexual marks are found principally in the structure of the antennæ, anterior tibiæ and clypeus, the antennal club being very long, distally recurved and 7-lamellate in the male and small, straight and with five full and one or two partially developed joints in the female. The pronotal punctures are sometimes rather coarser and sparser in the female than in the male, but this is by no means a general rule. The tibial modifications are analogous to those affecting the genus *Thyce*. The female in some species, especially in those having tridentate anterior male tibiæ, are extremely rare, and among all the numerous individuals in this group at hand, there is only a single example of that sex; in the *10-lineata* section however, females frequently occur, but in the Atlantic coast *variolosa*, among my 28 individuals there is not a single female. There is sometimes a singular variability within specific limits in the form of the squamules, especially of the pronotum; in *10-lineata*, for example, the scattered squamules are generally scale-like, but in two individuals before me they become finer and hair-like, without other apparent distinguishing features.

The various forms that must be recognized taxonomically are extremely numerous in the western and Sonoran faunas of North America, and it becomes a problem to know how to treat them. To consider them all as species would be inadvisable in the present state of opinion in regard to the meaning of the word species, and I have therefore placed many of them in the category of subspecies, although, if a detailed study of the genitalia were to be made, such

as that of J. B. Smith in *Lachnosterna* for instance, it would probably be found that a number of forms thus united subspecifically with others, differ in their complex sexual apparatus to such a degree as to prohibit copulation, even with apparently closely related forms, and we should then be compelled to give them the specific status. All this remains for the careful biologist of the future to work out. Meanwhile, so far as my material indicates, the various species and subspecies are as follows, the characters always taken from the male unless the contrary is stated:

Anterior tibiæ tridentate in both sexes. Kansas and Texas to Arizona..2
Anterior tibiæ bidentate in the male except in *arguta*, tridentate in the female, except in *occidentalis*, where they are bidentate in that sex exactly as in the male. Atlantic to Pacific and southward to Central America.....9
Anterior tibiæ unidentate in the male, bidentate in the female. Florida.32
2—Elytra obscurely tricostate; antennæ (♂) with the club not much longer than the head. Body in size and form nearly as in *variolosa*, reddish-brown in color and with sparse depressed yellow hairs; prothorax about twice as wide as long, much rounded on the sides and narrowed both anteriorly and posteriorly; surface moderately densely punctured, channeled, with the sides, dorsal vitta and basal spots more densely pubescent with fine short yellowish hair-like scales; anteriorly there are a few longer hairs and the posterior margin is fringed with not very long hair; head as in *hammondi*, sparsely clothed with short yellowish hair, with long hair on the vertex, the antennæ paler, ferruginous, with the club not much longer than the head; elytra finely rugose, not very shining, with three faint costæ, which appear, with the suture, more densely pubescent; abdomen densely clothed with yellowish scale-like hairs, the pectus as usual with long yellow hair; anterior tibiæ with three acute teeth. Length 22.5 mm. Mexico (Sonora),—Webb.
*cavifrons Lec.
Elytra nearly even, sometimes finely and very faintly tricostulate; antennal club (♂) always much longer than the head.....3
3—Elytra without trace of solid vittæ at any part of the surface, but with lines of sparsely diffused scales.....4
Elytra with lines of sparsely diffused scales throughout, except a more solid short line at base near the humeri, sometimes prolonged nearly throughout the length.....5
Elytra with two or three nearly entire solid though more or less broken vittæ of dense, nearly white scales, which however are sometimes very indistinct or more sparsely squamose.....6
4—Last joint of the maxillary palpi slender, slightly arcuate, its outer surface feebly flattened though not at all impressed and slightly rugulose from basal fifth to apical third. Body much larger than the preceding, elongate, subcylindric, pale brownish-testaceous in color and rather shining; head with long coarse yellow hairs and

decumbent scales, coarsely, rather closely punctate; clypeus deeply concave, with rather strong separated punctures, constricted basally, the angles acute and very prominent, the apex broadly sinuate from angle to angle; surface densely clothed with pale yellowish scales in apical two-fifths, the remainder sparsely squamose; antennal club very pale, one-half longer than the head, very much curved; prothorax two and a third times as wide as long, rather strongly angulate at the sides behind the middle, the sides strongly converging and straight thence to the base and converging and feebly arcuate to the apex, broadly and very feebly crenulate basally; basal lobe rounded; surface feebly impressed and densely squamose along the middle and with a short dense vitta near each side; elsewhere the punctures are sparse and rather coarse, each filled by a large broad yellowish scale; erect hairs few in number and anterior and marginal only; scutellum densely squamose along the middle and with scattered scales thence to the sides; elytra fully two-fifths longer than wide, about a fourth wider than the prothorax, longitudinally impressed near the sides, the three fine costules sometimes evident, the sutural angles denticulate; scales very sparse, three to four times as long as wide, partially aggregated into feebly defined lines, very dense along the suture; pygidium wider than long, with well separated scales which are about twice as long as wide; abdomen with sparse scales, which are very dense toward the apices of the segments and also with longer erect hairs. Female unknown. Length 26.0–27.0 mm.; width 11.5–12.0 mm. Texas (El Paso),—Dunn. Three examples.

squamicauda n. sp.

A—Similar to the preceding in general habitus, coloration, vestiture and in the form of the last palpal joint but stouter in outline, the angles of the clypeus not quite so prominent or reflexed and its surface almost uniformly and rather loosely squamose throughout; antennæ similar; prothorax similar, except that there are no sublateral narrow condensed vittæ of scales, the median dense vitta similar; scutellum similar; elytra a fourth longer than wide, the scales rather more numerous and the aggregated lines rather better defined; pygidium about as long as wide, more narrowly rounded at apex, the scales rather more numerous but narrower than in the preceding, the abdomen similar. Length 25.5 mm.; width 12.3 mm. New Mexico. One specimen. . . **molesta** n. subsp.

Last joint of the maxillary palpi slender, the outer side with a narrow shallow groove half as long as the joint, beginning at basal fifth or sixth. Body very much smaller in size, pale yellow-brown in color and rather shining; head infuscate, somewhat coarsely, not densely punctate and with large scales and sparse erect hairs, the clypeus pale, moderately concave, subparallel, only just visibly narrowed at base, with prominent acute angles and feebly bisinuate apex, the punctures still coarser and less close than those of the vertex but shallow, the large scales rather sparse, smaller and closer apically; prothorax fully twice as wide as the median length, in form, sculpture and in the sparse broad scales, dense along the impressed median line, and in two interrupted sublateral vittæ, nearly as in *squami-*

cauda, each scale almost filling a coarse shallow puncture; scutellum throughout not very densely squamose, more densely and less coarsely medially; elytra nearly two-fifths longer than wide, slightly inflated posteriorly and there a fourth wider than the prothorax, the scales of the sparsely aggregated series much smaller and narrower than those of the anterior parts, the dense sutural line very narrow, three scales in width; pygidium but little wider than long, the lower angle broadly and obtusely rounded, convex, sparsely clothed with small scales; abdomen as in the preceding; hind tarsi smaller and shorter, the intermediate not as long as the tibiæ as they are in the two preceding, but evidently shorter. Length 20.5 mm.; width 9.3 mm. New Mexico..... **verecunda** n. sp.

5—Last palpal joint slender, with an elongate external strongly flattened or feebly impressed, minutely, closely asperulate area, from basal fourth to apical third, surrounded by notably coarse setigerous punctures. Body stout, subcylindric, shining, dark castaneous in color; vertex strongly punctate, with rather narrow and close-set scales near the eyes and with long close erect brown hairs throughout, the clypeus parallel, slightly narrowed at base, with rather acute and slightly everted angles and truncate to broadly sinuate apex; surface concave, with small feeble and very sparse punctures, denser laterally and apically, all bearing squamiform hairs, smaller and finer apically; antennal club only moderate, twice as long as the stem and two-fifths longer than the head; prothorax notably short and transverse, a little more than twice as wide as the median length, obtusely angulate near the middle of the sides; surface generally paler laterally, with moderately coarse, shallow and very sparse punctures, each with a slender scale, the vestiture dense in the depressed median line and sublaterally toward base; erect hairs only visible anteriorly and along the finely serrulate lateral edges; scutellum with small scales throughout except apically, denser medially; elytra with rather uneven surface, two-fifths to nearly one-half longer than wide, only just visibly wider than the prothorax, the scales of the sparsely aggregated series very slender, five times as long as wide, dense along the suture; sutural spine very minute; pygidium slightly wider than long, only feebly convex, clothed sparsely with depressed stout hairs, intermixed with a few broader scales; abdomen as usual; hind tarsi much, the intermediate evidently, shorter than the tibiæ; ungual teeth acute and feebly reflexed at tip. Length 24.5–25.5 mm.; width 10.7–12.5 mm. Kansas (Douglas Co.) and Illinois (Havana,—Hood). Seven examples, the female not at hand.

hammondi Lec.

Last palpal joint slender, finely and closely punctured and setose apically, having, on the outer side, a long feeble asperulate impression from near the base to apical third, the surrounding punctures much smaller than in *hammondi*. Body smaller in size and pale bright red-brown in color, rather shining, subcylindric, the vestiture white; vertex coarsely, densely punctate and with large white scales, denser toward the eyes, also with some erect brownish hairs; clypeus concave, the sides nearly straight and very feebly diverging from base

to the distinct but not prominent angles; apex truncate to faintly bisinuate; surface with coarse shallow and rather close-set punctures, each with a large white scale, the latter smaller and dense apically; prothorax short, distinctly more than twice as wide as the median length, the sides obtusely prominent just behind the middle, coarsely, very sparsely punctate, each puncture with a very large broad scale, the scales very dense along the impressed median line, in a broken lateral vitta and along the base from the vitta not quite to the middle, the sparse hairs as in the preceding; scutellum with large dense white scales throughout; elytra nearly one-half longer than wide, barely at all wider than the prothorax, the lines of aggregated scales very distinctly defined throughout, the scales broad, not three times as long as wide, dense along the suture, large in discal lines 1–3–5, smaller and more close-set but not dense in the intervening lines; pygidium clothed rather closely, more densely basally, with broad white scales, which are less than twice as long as wide and similar throughout; abdomen sparsely squamose and hairy, the scales very dense along the apices of the segments; middle tarsi as long as the tibiæ, the posterior distinctly shorter; antennal club moderate, pallid, more than twice as long as the stem. Length 22.5 mm.; width 10.3–10.7 mm. Texas (near El Paso),—Dunn. Three specimens.

oblita n. sp.

A—Similar to *oblita* in general form, color, palpi, antennæ and vestiture, but larger and rather stouter; head and prothorax nearly similar but with the latter not so short, only very little more than twice as wide as the median length and with the condensation of scales along the base inwardly from the sublateral vittæ much less evident, the scales everywhere not quite so broad in form; aggregated lines of elytral scales similarly abruptly outlined but with the scales much sparser in the lines and of narrower, more elongate form, though similarly alternating in size and more notably in width, the smaller scales of the alternating lines partially of very slender form; pygidium more sparsely clothed throughout with smaller and distinctly more slender scales; legs and tarsi similar. Length 23.0–25.0 mm.; width 10.3–11.8 mm. New Mexico. Three specimens. . . . . **impigra** n. subsp.

6—Last joint of the maxillary palpi slender, the outer side with an elongate flattened area, which is sometimes even feebly impressed. 7

Last joint a little stouter, the outer side convex, not flattened. 8

7—Form subcylindric, testaceo-ferruginous, sparsely clothed with small white scales, more cylindric than *cavifrons* and paler in color; clypeus with anteriorly diverging sides and well defined angles, the vertex with yellow hair; prothorax a little more than twice as wide as long, the sides almost angulated, narrowed very much in front and moderately behind, the surface anteriorly without hairs in the type, which was found mutilated and presumably dead, with the anterior tibiæ much worn; densely squamose dorsal channel and sublateral vittæ somewhat as in the *10-lineata* section, the lustre shining and the punctures moderate, the hind margin fringed; elytra shining, coarsely rugose and punctured, with the suture and three vittæ on

each more densely squamose, the two inner vittæ extending to apical fourth, the outer less distinct but entire, bending around the apex almost to the suture; body beneath as in *cavifrons*. Length 27.5 mm. Texas (one specimen, found on the Rio Grande)... **subvittata** Lec.

A—Apparently similar to the preceding but larger and with much less developed outer vitta of the elytra, pale ferruginous, shining, cylindric, convex, not very stout, the vestiture sparse, white and squamiform; vertex strongly, closely punctate, with dense scales laterally and long erect brownish hair, the concave clypeus much constricted at base, with very prominent angles and broadly bisinuate apex; antennal club three times as long as the stem; prothorax evidently more than twice as wide as long, the sides strongly but obtusely angulate behind the middle; surface with rather coarse and sparse but shallow punctures, each with a large scale, the scales dense in the impressed median line and also in a short subbasal vitta near each side; erect hairs distinct throughout medially, more abundant apically, the hairs borne by the reflexed margins unusually short and posteriorly reclined; scutellum densely squamose medially, except at apex, and also with some scales laterally; elytra nearly one-half longer than wide, a fifth or sixth wider than the prothorax, circularly rounded behind, the scales everywhere sparse, except in the two inner very ragged and more or less discontinuous dense vittæ, the outer dense vitta wholly wanting except posteriorly, where it sometimes curves around the apex almost to the suture, the latter densely squamose as usual; scales about three times as long as wide; pygidium with small, sparse and unevenly distributed scales; abdomen concolorous, sparsely squamose, densely at the segmental apices, the erect hairs sparse; anterior tibial teeth all very strong; middle tarsi not quite as long as the tibiæ; last palpal joint with an elongate and well defined flattened area from basal sixth to apical fourth. Length 28.0–30.0 mm.; width 12.7–13.3 mm. Two examples.

Female larger, still more shining and much more sparsely squamose than the male, the head and clypeus much more sparsely punctate, the latter more parallel, with less expanded apex; antennal club as long as the three preceding joints combined, 6-jointed, the inner joint two-thirds the length of the others; prothorax formed as in the male but more convex and with extremely remotely scattered punctures, each bearing a similar scale, the dense median line finer, the sublateral vittæ barely traceable; scutellum glabrous, excepting an isolated spot of dense scales at the middle; elytra without trace of vittæ and only with very small and extremely remotely scattered scales, the suture dense as usual; pygidium glabrous and more convex along the middle, also glabrous sublaterally, elsewhere with small and remotely scattered scales; hind tarsi slender, three-fifths as long as the tibiæ, the intermediate broken in the type; last joint of the maxillary palpi not differing much from that of the male. Length 32.0 mm.; width 14.0 mm. One specimen.

Texas (near El Paso),—Dunn..... **bisinuata** n. subsp.

Form subcylindric, more elongate and still larger, darker red-brown in color, moderately shining, sparsely squamose; head large; vertex coarsely but not densely punctate, with some whitish scales laterally and numerous long coarse brown hairs; clypeus very deeply concave, much constricted at base, the angles sharp and prominent, the apex broadly bisinuate; surface with sparse punctures and large scales, smaller and dense apically; last palpal joint slender, with but few small punctures, the outer side with a fusiform and strongly defined flat rugulose area from basal fifth to apical third, the ends of which are more acutely angulate than usual; antennal club large, between three and four times as long as the stem; prothorax very convex, a little more than twice as wide as long, as in all the preceding species in outline but with the entire periphery finely deep black, the punctures coarse shallow sparse and irregularly distributed, each with a large yellowish-white scale, the impressed median line and short sublateral basal vittæ densely squamose; scutellum densely squamose medially and basally toward the sides; elytra unusually rugose, large, two-fifths to nearly one-half longer than wide, the scales whitish, sparse, dense in two ragged inner discal vittæ, the outer vitta undeveloped, indicated in very small part in only one example; pygidium with small broad sparse scales; middle tarsi almost as long as the tibiæ, the posterior much shorter; three teeth of the anterior tibiæ well developed. Length 28.0–33.0 mm.; width 14.0–15.0 mm. New Mexico (Albuquerque). Three examples..... **sejuncta** n. sp.

Form much more abbreviated and less cylindric than the two preceding, moderately shining, pale ferruginous, sparsely scaly, the scales white or nearly so; head and clypeus nearly as in *sejuncta*, the erect pale brown hairs of the vertex more slender; antennal club pale, very strongly curved, between three and four times as long as the stem; last palpal joint slender, sparsely punctate, the outer side narrowly flattened and feebly roughened as usual to about apical third, but with the flattened area not very well defined as it is in all the preceding species; prothorax strongly convex, twice as wide as the median length, in form and general characters nearly as in the preceding but a little shorter, the sides obtusely prominent and angulate just behind the middle; surface with very sparse, moderate and shallow punctures, each nearly filled by a short broad scale, the scales dense in the narrow impressed median line and also in a narrow oblique broken sublateral vitta and thence along the margin inwardly for some distance; scutellum densely squamose broadly along the middle; elytra a third longer than wide, about a fourth wider than the prothorax, circularly rounded behind, feebly rugulose and feebly sparsely punctate, each puncture with a small and rather narrow scale, which is three times as long as wide, the scales dense along the suture and in four vittæ, the two inner—the second and fourth discal lines of scales, dense and subeven, the third very fine and only visible for a short distance behind the middle, the submarginal feeble and only evident behind the middle; pygidium sparsely and irregularly squamulose; three teeth of the anterior tibiæ strong; hind tarsi short, very much shorter than in either the following or two

preceding species, barely two-thirds as long as the tibiæ. Length 27.5 mm.; width 13.3 mm. Arizona. A single specimen.

proba n. sp.

8—Last palpal joint differing distinctly from that of the three preceding species, stouter, the outer surface not at all flattened but convex, with an elongate-oval area of minute rugulosity from basal fourth to apical third, its under surface with close-set and rather strong setigerous punctures in more than apical half; body very much larger in size and less convex, very stout, strongly shining, rather dark red-brown in color, the sparse scaly vestiture yellowish-white; head large, the punctures of the vertex not very coarse, rather shallow and close-set, the large pointed scales dense except medially, the erect brown hairs numerous; clypeus large, strongly narrowed at base, the angles acute and obliquely very prominent, the apex broadly bisinuate; surface concave, with coarse and shallow, not very close-set punctures, bearing large elongate scales, which as usual become smaller and very dense apically, the erect hairs short and few in number; antennal club generally rather dark in color, three times as long as the stem; prothorax almost exactly as in *impigra* throughout and similarly clothed, except that the small inequality near the middle of each side is more distinct, with its small condensed spot of scales more evident; scutellum very different, broadly and densely squamose medially, glabrous or nearly so thence to the sides; elytra two-fifths longer than wide, oval, circularly rounded behind, a fourth wider than the prothorax, the lines of sparsely aggregated scales well defined, the sutural line dense, the first discal line of diffused scales notably broad basally, the dense line of the suture extending outwardly along the apical edge for a short distance, the scales everywhere only moderate in size but broad, twice as long as wide; pygidium with similar scales, rather dense basally and thence broadly along the middle and again near the sides; abdomen in great part black, clothed as usual; first tooth of the anterior tibiæ smaller and feebler than usual, middle tarsi distinctly shorter than the tibiæ. Length 31.0–32.5 mm.; width 14.5–15.2 mm. Arizona. Two specimens. . . . . **diffusa** n. sp.

Last palpal joint long and very slender, but little over half as wide as the penultimate, similarly convex externally but with the oval chagrined area very much narrower than in *diffusa;* body smaller and of much more abbreviated form, oblong-suboval, somewhat inflated posteriorly, dark red-brown in color and shining; head, clypeus and antennæ nearly similar, except that the clypeus is notably narrower and more parallel, the apex subtruncate to broadly, feebly sinuate; prothorax and scutellum nearly similar throughout; elytra scarcely one-third longer than wide behind the middle two-fifths wider than the prothorax, the surface sculpture nearly as in *diffusa* but differing greatly in having the second and fourth lines of whitish scales very dense and conspicuous, the second the narrower and generally exhibiting a greater tendency to disintegrate; pygidium flatter, almost similarly squamose and with very sparse stiff erect hairs, the scales broad, sparser near the sides;

tarsi throughout not quite so long. Length 26.5–28.5 mm.; width 13.0–14.5 mm. Arizona (probably southern). Two examples.

pimalis n. sp.

9—Pronotum with more or less evident erect hairs throughout the surface 10

Pronotum without erect hairs, except in some instances, a few medially toward apex 16

10—Elytral vittæ very imperfect, narrow and much broken, somewhat as in the preceding section; body of smaller size than usual; antennal club feebly developed, not or but slightly longer than the head; female not at hand 11

Elytral vittæ dense and even or very nearly so, as in the *10-lineata* section 14

11—Body very pale ferruginous in color, the vertex and abdomen black; elytral scales binary in coloration, those of the vittæ white, those of the intervals pale yellow. Vertex strongly, closely punctate, with dense whitish scales toward the eyes and with erect hairs; clypeus rufous, feebly concave, the sides parallel and straight, the apex transverse, slightly prominent medially, the angles right, slightly blunt; surface strongly and closely punctate, with separated yellow scales, which are smaller and dense anteriorly; last palpal joint somewhat obtusely deflexed at tip and with a narrow flattened external area; prothorax short, evidently more than twice as wide as its median length, obtusely subprominent at the sides behind the middle, the punctures rather coarse, sparse, each bearing a very slender yellow scale, those of the entire median depressed line and oblique sublateral vitta, in about basal half, whitish, those of the latter sparser and yellowish apically; scutellum with dense whitish scales along the middle; elytra two-fifths longer than wide, between three and four times as long as the prothorax and a fourth wider, the three narrow vittæ of white and moderately dilated scales very imperfect and only traceable on parts of the disk, the sutural dense white line even; scales of the intervals sparse and very much finer than those of the suture and vittæ and yellow in color; general surface rather rugose, very irregularly punctate and moderately shining; pygidium as long as wide, with the sides unusually feebly converging, the apex broadly rounded; surface convex, with a close-set mixture of broader and narrower yellowish scales; middle tarsi about as long as the tibiæ. Length 23.0 mm.; width 10.7 mm. Oregon (the single example is so marked but perhaps erroneously).

opposita n. sp.

Body very dark blackish-castaneous throughout, the elytral vestiture almost uniform in coloration 12

12—Last palpal joint unusually short, only about twice as long as wide and obtuse at tip, the narrow flattened area feebly defined and indistinct; pronotal punctures coarse and very remotely and unevenly disposed. Body elongate, subcylindric, shining, the decumbent vestiture sparse and white; vertex with strong punctures, widely and unevenly separated toward the middle, with some erect hairs and narrow whitish scales near the eyes, the clypeus even more

coarsely and deeply punctate, the punctures well separated and bearing very slender scales, which become dense and more erect apically; apex broadly, feebly arcuate, the angles very obtuse, the sides straight; antennal club pale yellow-brown; prothorax twice as wide as the median length, the sides broadly and moderately subangulate at the middle; surface very shining, pallescent near the sides, the punctures relatively very large, coarser than in any other species, moderately deep, very remotely and irregularly scattered, smaller and much closer toward the sides, each with a narrow scale-like hair, the depressed median line and a medial dash at lateral fourth having dense and more dilated scales; erect hairs rather long but very sparse throughout; scutellum broadly squamose medially and with scattered scales elsewhere basally; elytra coarsely rugose and finely, sparsely, very irregularly punctate, two-fifths longer than wide and two-fifths wider than the prothorax, the suture, contrary to the general rule, without denser scales except posteriorly, the alternating discal lines of denser scales very narrow and inconstant, the outer wholly wanting in the type; pygidium with small scales, very dense basally, less dense and irregular elsewhere and with a narrow glabrous median line except basally; abdomen densely squamose, sparsely toward the bases of the segments; tarsi unusually short, the intermediate scarcely two-thirds as long as the tibiæ. Length 23.7 mm.; width 10.6 mm. New Mexico. A single specimen (received from an unrecorded source).....**adusta** n. sp.

Last palpal joint more slender, less obtuse and subdeflexed at apex, always more than twice as long as wide; pronotal punctures strong but less coarse and less sparse than in *adusta*.....13

13—Body rather elongate and subcylindric, with sparse yellowish-white vestiture, shining; vertex strongly and closely punctate, with long close erect pale brown hairs and, toward the eyes, rather dense whitish scales; clypeus strongly reflexed apically, with close-set punctures, distinctly smaller than those of the head, each bearing a scale-like hair, becoming very dense and pubiform apically, the outline as in *opposita;* last palpal joint two and one-half times as long as wide, the outer surface convex, barely at all flattened, though with an undefined asperulate area; prothorax in form nearly as in the preceding but broader, with the punctures nearly as coarse but much closer, in fact at certain parts rather dense, the subdecumbent short stout hairs very sparse, the long erect hairs much more numerous; impressed median line and a sublateral oblique vitta—in basal half only—having dense whitish scales; elytra two-fifths longer than wide and a fourth wider than the prothorax, the surface rather intricately rugose and punctured, less coarsely and much more closely than in the preceding; suture with dense scales, sometimes becoming much less dense basally; three discal lines of dense squamæ generally distinct and entire but fine and ragged; vestiture of the intervals sparse, composed of short stout hairs, slightly more yellowish than the denser lines; pygidium densely clothed with small stout hairs, becoming sparse laterally and apically but without trace of a definite glabrous median line; abdomen sparsely squamulose, densely

toward the segmental apices; middle tarsi much less abbreviated than in *adusta*, being barely visibly shorter than the tibiæ. Length 21.3–24.0 mm.; width 10.2–11.3 mm. New Mexico,—F. H. Snow. Two examples..... **diffracta** Csy.

Body shorter, relatively stouter and more oval, very convex, shining, with sparse yellowish-white vestiture; vertex and clypeus subsimilarly coarsely, strongly, very closely but not confluently punctate, the vertex with many erect brownish hairs and some whitish scales near the eyes, the clypeus with sparse hair-like pale yellow scales, denser on the reflexed apex, which is broadly arcuate in outline, a little more so medially, the angles obtuse, the sides thence slightly converging to the base; last palpal joint not quite three times as long as wide, the elongate and slightly flattened asperulate outer area rather well defined; prothorax throughout nearly as in *diffracta*, except that the coarse punctures are not quite so close-set, sometimes being rather sparse sublaterally, the long scales of the impressed median line and basal sublateral vittæ less dense, generally not quite in mutual contact, the short vittæ, especially, broader and more diffuse; erect hairs longer, more numerous and more conspicuous; scutellum similar, densely squamose along the middle and with scattered scales laterally toward base; elytra shorter and more broadly oval, a fourth longer than wide and about two-fifths wider than the prothorax, al-almost similarly rugose, more sparsely punctate, the suture with a broad and even vitta of very close-set small scales from apex to base, the three discal lines on each also much broader, similarly ragged and composed of smaller and less elongate squamules, more yellowish in color, the squamules of the intervals still smaller, sparse and very slender; pygidium more densely clothed throughout with broader scales, mixed with short and more erect slender hairs; intermediate tarsi not so long, distinctly shorter than the tibiæ. Length 20.0–23.3 mm.; width 10.2–11.5 mm. Arizona (Chiricahua Mts.),—V. W. Owen. Three examples..... **fuscula** Fall

14—Elytral vestiture in the form of scales between three and four times as long as wide; pronotal punctures notably coarse, as in the three preceding species. Body of moderate size, cylindric-oval, black or nearly so, the prothorax rufous; integuments moderately shining, rather closely clothed, the dense scales white, the others yellowish; vertex and clypeus closely and strongly punctured and with close erect pale brown hairs throughout, the vertex with dense scales toward the eyes, the clypeus with sparse scales and many erect hairs, the scales becoming smaller and very dense apically, the apex arcuato-truncate, the angles distinct, sometimes slightly prominent, the sides subparallel; last palpal joint slender, fully three times as long as wide; antennal club longer than in *crinita*, more than twice as long as the stem; prothorax more than twice as wide as long, the sides angulate and prominent at the middle, thence equally converging and straight to base and apex; surface with the coarse punctures widely separated, each with a long scale or stout hair, they being diversified in form, the median line, an oblique vitta at outer fifth, in about basal half, and the base thence internally, having very dense

whitish scales; erect hairs rather short, except apically, sparse and rather inconspicuous; scutellum very densely squamose along the middle, but elsewhere with only very few widely scattered scales; elytra a third longer than wide, somewhat inflated behind the middle and nearly a third wider than the prothorax, very feebly rugulose, inconspicuously punctate, each with the suture, three discal subeven lines and a short one behind the humeral umbo, densely albido-squamose; intervals with rather close-set yellowish scales, leaving a vacant interval adjoining the dense lines moderately well defined; pygidium with small, very dense, suberect scales and short erect hairs, all gradually sparse toward the sides, without trace of a glabrous line; middle and hind tarsi subequal, the former evidently, the latter much, shorter than the respective tibiæ. Length 24.0 mm.; width 10.8–11.5 mm. Oregon (Graham),—Moznette. Two examples. **modulata** n. sp.

Elytral vestiture small, fine and rather more hair-like than squamiform, the dense vittæ however composed of true scales as usual; pronotal punctures less coarse and rather close-set.....15

15—Antennal club large, nearly as in *modulata* and *10-lineata;* body large in size. Color dark piceous, clothed sparsely with depressed and slightly squamuliform pale yellow hairs, the vertex and the pronotum anteriorly with longer pubescence, the latter canaliculate and with three white vittæ; scutellum along the middle, the elytral suture and three discal and one short post-humeral vittæ on each elytron, white; pygidium frequently, and the legs and antennæ invariably, ferruginous. The yellow scale-like hairs are lanceolate and narrow, being, on the elytra, about four times as long as wide; on the pronotum, especially in the vittæ, they are broader, but toward the margins they are elongated and are gradually converted into long hairs, which toward the apex are as long as those on the back of the head; the sides of the prothorax from a dorsal viewpoint appear rounded and not angulated. Male with the antennal club large, the clypeus rectilinearly truncate, the hind thoracic margin with long hairs. Length 24.2–29.2 mm. Female with the antennal club small, the clypeus subsinuate at apex, the hind thoracic margin with shorter fringe, more as in *10-lineata*; anterior tibiæ tridentate. Length 26.2–33.8 mm. Oregon, Washington State and California. . **crinita** Lec.

A—Male apparently similar to *crinita* but with the integuments deep black throughout, the pygidium deep black, the femora blackish, the tibiæ and tarsi obscure ferruginous; antennæ dark brown; vestiture white, the sparse hair-like squamules pale yellow, the erect hairs pale yellow-brown; vertex and clypeus densely punctate, clothed with long erect hair and scattered elongate scales, denser near the eyes, also dense and smaller and without erect hairs in about apical half of the clypeus, which is broadly arcuate and moderately reflexed at apex and with obtuse rounded angles; antennal club between two and three times as long as the stem; palpi dark brown, the last joint stout, obliquely acute at tip, the external outline arcuate to the tip, having externally a large broad oval chagrined area, which is not flattened; prothorax twice

as wide as long, roundly angulate at the sides, which are thence feebly converging basally, more strongly apically; punctures relatively rather small, well separated, each with a slender hair-like depressed scale, varying in degree of fineness, becoming dense and white in the strongly impressed median line and sublateral oblique vittæ, the latter interrupted beyond the middle, also with the erect hairs sparse and only moderately long, becoming very long anteriorly; scutellum densely squamose along the middle; elytra a third longer than wide, fully two-fifths wider than the prothorax, circularly rounded behind, feebly rugulose and with rather fine and irregularly sparse punctures bearing the yellow hair-like scales, five or six times as long as wide, the dense white lines and suture as in *crinita;* pygidium large, slightly transverse, triangular, nearly flat, strongly reflexed at tip, very densely and evenly clothed throughout with small whitish scales and fine short hairs; middle tarsi scarcely more than four-fifths as long as the tibiæ. Length 28.0 mm.; width 13.0 mm. A single specimen labeled "Texas" but certainly in error and probably from Washington State.

nigra n. subsp.

B—Male still larger in size, pale ferruginous in color throughout the body, legs and antennæ, the elytra piceous-black, the abdomen black, paler at apex; pygidium obscure ferruginous; decumbent scale-like hairs pale yellow, the erect hairs pale yellow-brown, the dense lines of scales white; head somewhat as in the preceding, except that the clypeus is notably broader, with the sides more strongly converging from the obtusely rounded angles to the base; vertex blackish; antennal club large, three times as long as the stem; palpi as in *nigra* but paler in color; prothorax in outline nearly as in the preceding, the sides more nearly parallel in less than basal half, strongly converging before the obtuse angulation, pale rufous in color, with slightly coarser but shallow, irregularly rather well separated punctures, the vittæ and decumbent scale-like hairs nearly similar, but the erect hairs are everywhere long, abundant and very conspicuously shaggy, much more abundant and longer, except apically, than in *nigra;* scutellum ferruginous, densely squamose along the middle and with a few scales sparsely scattered laterally; elytra large, two-fifths longer than wide and two-fifths wider than the prothorax, rounding posteriorly from slightly behind the middle, the dense white suture and vittæ as in *nigra,* the surface rather smoother, the small punctures more numerous, the scale-like hairs five or six times as long as wide, similarly very gradually and finely attenuate; pygidium in form and vestiture nearly as in *nigra;* middle tarsi slightly longer, almost as long as the tibiæ. Length 32.0 mm.; width 14.0 mm. A single example, without indication of locality but probably from Oregon. . . . . **mystica** n. subsp.

Antennal club notably small, only slightly longer than the head and not quite twice as long as the stem, more nearly as in the *opposita—fuscula* series; body of smaller size than in *crinita* and allied forms; coloration of the integuments and nature and coloration of the vestiture through-

out almost exactly as in *mystica*, the body very much smaller; head similar, but with the sides of the clypeus much more parallel; last palpal joint smaller, irregularly oval, scarcely more than twice as long as wide, the outer side not flattened though similarly minutely chagrined; erect hairs of the vertex dense, very long and conspicuous; prothorax much shorter, more than twice as wide as long, bright ferruginous in color, sometimes becoming broadly black medially, obtusely angulate at the sides, the latter moderately converging thence basally, more strongly apically, the edge rather strongly crenulate basally; punctures rather coarse, close-set, the fine hairs small, closer and more decumbent antero-laterally, elsewhere suberect and shorter, to erect and longer, very numerous, giving a notably shaggy effect throughout, the medial dense vitta narrow, the oblique sublateral represented only by basal half and a small spot at the apex; scutellum with dense slender scales along the middle; elytra rather short, a third longer than wide, a fourth wider than the prothorax, the surface rather shining, only very feebly rugulose and finely, sparsely punctate, the decumbent yellowish hairs not at all squamiform as in the three preceding, but fine and in the form of rather stout and gradually attenuated hairs, the dense suture and vittæ composed of pure white moderate scales; pygidium wider than long, slightly convex, triangular as usual, the apex only moderately reflexed, the vestiture rather dense and uniform, of very fine scales and short fine hairs, all slightly yellowish, a median line from the base, gradually narrowing to beyond the middle, completely glabrous; middle tarsi about as long as the tibiæ. Length 23.0–24.5 mm.; width 10.9–11.7 mm. California (Alameda Co.). Four examples as described and a fifth that can not be distinguished otherwise but without trace of the glabrous subembossed pygidial line of the other four..... **incolumis** n. sp.

A—Male similar to *incolumis* but of more elongate form and darker coloration, black, the pronotum rufescent laterally, the pygidium obscure rufous; legs dark ferruginous throughout; head and antennæ nearly similar, the last palpal joint also similar but with the outer chagrined area better defined and somewhat flattened; prothorax similar, but with the erect hairs shorter and less numerous except anteriorly; scutellum with a triangular basal area densely squamose; elytra one-half longer than wide, a third wider than the prothorax, the sculpture and vestiture nearly similar; pygidium with a close-set mixture of small slender scales and short hairs, sparser medially toward base, but without trace of a polished glabrous line; middle tarsi not so long, distinctly shorter than the tibiæ, the hind tarsi rather longer. Length 26.5 mm.; width 11.7 mm. One specimen.

Female stouter, more ventricose and more sparsely clothed than the male, rufo-piceous almost throughout, the abdomen black, the legs dark ferruginous; vertex with strong deep and very close-set punctures, those of the clypeus a little smaller and shallower but similarly close; erect hairs long but less conspicuous than in the male and entirely confined to the vertex, the scales near the

eyes large and distinct; clypeus much shorter, with sparse vestiture throughout, the apex more abruptly reflexed, the angles right, not rounded, the sides parallel thence for a short distance, then widely diverging and arcuate to the base; apex broadly and feebly arcuate medially; antennæ fuscous, the club less than half as long as the stem; last palpal joint similar to that of the male but a little smaller; prothorax subsimilar but narrower and relatively smaller, less than twice as wide as long, the punctures notably coarser, deeper and rather more separated, the vittæ nearly similar but narrower and not so compact, the erect hairs rather shorter, except apically, less numerous and not so conspicuous; side margins more strongly crenulate; scutellum densely though more narrowly squamose along the middle; elytra more oval, a third longer than wide and almost one-half wider than the prothorax; sculpture and vestiture nearly as in the male, except that the compact white lines are narrower; pygidium similar in form and size, equilatero-triangular, very densely squamulose, more sparsely gradually toward the sides and apex, without the evident sparser median line of the male; tarsi still shorter and more slender. Length 27.0 mm.; width 13.0 mm. One specimen.

California (the male and female apparently from the same source but from an unrecorded part of the state)... **relicta** n. subsp.

B—Male similar to *incolumis* but broader in outline and black throughout, the pronotum narrowly rufous at the sides, the pygidium dark ferruginous; legs dark rufous, the femora more obscure; vertex and clypeus, except the densely squamulose apex of the latter, with close erect and conspicuous hair, the clypeus parallel, arcuato-truncate, with obtuse angles; palpi and antennæ nearly as in the preceding; prothorax similar, the long erect hairs numerous and conspicuous throughout; elytra only about a fourth longer than wide, two-fifths wider than the prothorax, throughout as in *incolumis*, except that the decumbent yellowish hairs are still smaller, very slender and more close-set; pygidium much larger, transversely triangular, the close mixture of small slender scales and short hairs still finer and without trace of a glabrous or even of a sparser median line; middle tarsi long, fully as long as the tibiæ. Length 24.5 mm.; width 12.8 mm. California (Los Angeles Co.). One specimen..... **robustula** n. subsp.

16—Elytra with lines of dense white scales, which are sharply differentiated from the more slender scattered scales of the intervals. Sonoran and Pacific in range and southward to Central America..17

Elytra with less sharply defined and more inconstant lines of dense white scales, which blend more gradually into the finer and sparser vestiture of the intervals; females abundant. Atlantic coast.....30

Elytra with small and very irregular blotches of dense squamules, which sometimes exhibit a tendency to lineal arrangement on parts of the surface; females very rare. Atlantic coast regions.....31

17—Antennal club relatively small, somewhat as in the *diffracta* and *incolumis* sections, the dense elytral lines of white scales more or less ragged or irregularly broken; females apparently very rare.....18

Antennal club large, three to six or seven times as long as the stem; dense elytral lines of white scales even, never ragged, sometimes though very rarely broken and then with a clean and not irregular break; females abundant, sometimes much more numerous than the males. 22

18—Middle tarsi short, the fifth joint longer than the three preceding combined; elytra very strongly and deeply rugose. Body small in size, of short subcylindric, posteriorly very obtuse form, shining, black, the sides of the pronotum, pygidium, legs and antennæ more or less distinctly rufescent; vestiture sparse; vertex and basal parts of the clypeus with strong and well separated punctures, the vertex with sparse and not very long, suberect hairs, also some scales along the sides; clypeus feebly sinuate medially at apex, with rounded angles, the sides thence converging to basal fourth, then diverging to the base, the broadly reflexed apex and the sides with dense yellowish scales, the median parts basally sparsely squamose; antennal club shorter than in any other species, distinctly less than twice as long as the stem, but little more than four times as long as thick, rather feebly bent apically; last palpal joint small, convex, the rough patch on the outer side very small, feeble and indefinite; prothorax twice as wide as long, the sides parallel in basal, converging in apical, half; punctures coarse, well separated, remote at some points, much smaller and closer toward the sides, the vestiture sparse, varying from elongate attenuate scales to longer stiff inclined hairs, the median and the broad and anteriorly interrupted sublateral vittæ, composed of short broad scales; scutellum with small short dense scales broadly along the middle; elytra less than a third longer than wide, rapidly and very obtusely rounded at apex, parallel, barely a fourth wider than the prothorax, the strong coarse anastomosing rugosity interspersed with fine punctures bearing small yellowish squamules, which are four times as long as wide, each elytron with a sutural, three discal and a short post-humeral narrow and ragged line of whitish scales, which are short and broad and barely in mutual contact; pygidium large, transversely triangular, with all the sides equally arcuate, the surface very smooth, shining and with very small scales and fine short hairs, becoming dense basally, elsewhere more or less sparse; middle tarsi much shorter than the tibiæ. Length 21.0 mm.; width 10.0 mm. Arizona (Grand Cañon of the Colorado),—Prudden. Female unknown..... **rugosipennis** n. sp.

Middle tarsi longer, the fifth joint shorter than the preceding three combined; elytra more sparsely, finely and feebly rugulose, more circularly rounded behind..... 19

19—Pygidium subglabrous and polished, with rather fine and feeble, very sparse and subasperulate punctures, each bearing a small slender subdecumbent hair, these hairs without intermixed squamules and becoming rather close-set toward base. Body oval, convex, rather small in size, somewhat shining, castaneous, the abdomen black, pale at tip; vertex with strong deep and close-set punctures, which are smaller and less close on the moderately reflexed clypeus, having a number of moderately long erect hairs and with elongate attenuate

scales near the eyes; clypeus with parallel and nearly straight sides, transverse, medially slightly sinuate apex and blunt angles, clothed with very slender squamules, sparse basally, dense apically; antennal club missing in the type; last palpal joint nearly three times as long as wide, testaceous; prothorax a little more than twice as wide as long, rather broadly and feebly lobed at base, the sides obtusely angulate behind the middle, thence about equally converging to apex and base; punctures coarse, close-set at some points, very sparse at others, smaller and close near the sides, the sparse pale yellowish vestiture varying from slender scales to longer suberect stiff hairs; sublateral whitish vittæ broad and dense in basal half, diffuse and obsolescent in apical half, the median line rather narrow; scutellum densely clothed throughout its surface, except at tip, with moderate whitish scales; elytra a third longer than wide, a fourth wider than the prothorax, oval, rounding behind the middle, rather strongly but sparsely punctured and with very small sparse squamules, which are nearly four times as long as wide and of exactly the same color as the whitish dense scales of the suture and discal lines, the latter somewhat ragged; lateral longitudinal impression long and distinct; pygidium wider than long, arcuately triangular, convex, shining, concolorous; abdomen with very sparse whitish scales, dense at the segmental apices. Length 22.0 mm.; width 10.5 mm. Arizona. One specimen.....**lævicauda** n. sp.

Pygidium very densely clothed throughout or in great part.....20

20—Pygidium closely clothed throughout with perfectly uniform white appressed scales, fusiform and about twice as long as wide, without trace of short intermingled minute hairs. Body rather narrow, elongate and cylindric-oval, deep black almost throughout, the legs ferruginous, with blackish femora, moderately shining; vertex with rather small but deep punctures and clothed densely with very stout depressed scales, twice as long as wide or less, sparser medially, dense peripherally; clypeus rather short, deeply concave, pallescent apically, truncate at apex, the angles acute and laterally prominent, the sides thence sinuously converging to the base; scales much longer and more slender than those of the vertex, sparse, denser laterally and apically, the erect hairs rather short, fine and inconspicuous; antennæ testaceous, the club twice as long as the stem; last palpal joint more than three times as long as wide; prothorax barely twice as wide as long, subtrapezoidal, the sides broadly rounded and subprominent behind the middle, thence parallel to the base and moderately converging apically, deep black, shining, with sparse and moderate punctures bearing large scales, the three white vittæ all broad, dense and entire, none of the dorsal scales become in the least hair-like and there is no trace of erect hairs, the broad scales mutually subsimilar almost throughout, becoming narrow laterally, where the reflexed margin is feebly, diaphanously paler; scutellum with a large triangle of very dense small scales; elytra fully two-fifths longer than wide, barely a fourth wider than the prothorax, rather more rapidly rounding behind in apical third; punctures fine and sparse, the scales of the intervals pale yellowish, sparse, fusiform and twice

as long as wide, those of the rather ragged vittæ and suture somewhat smaller, dense and white; pygidium transversely arcuately triangular, only feebly convex, the small stout and closely appressed fusiform scales very close-set, sparser laterally; abdomen closely clothed with appressed white scales throughout; tarsi slender, the intermediate rather longer than the tibiæ; anterior tibiæ with the two apical teeth long and acute, the outer edge also with a very short and acute though vestigial tooth, just beyond the middle of the length. Length 23.5 mm.; width 10.3 mm. Utah (Provo),—Spalding. One example..... **arguta** n. sp.

Pygidium with a very dense mixture of slender attenuate yellowish and not so closely appressed squamules and very short fine hairs, virtually throughout the surface; anterior tibiæ purely bidentate as usual; clypeus broader..... 21

21—Form moderately stout, cylindric-oval, rather shining, pale rufo-castaneous in color almost throughout, the abdomen black, the legs ferruginous; head rather broad; vertex black, strongly punctured, with many rather long erect coarse brown hairs and with decumbent whitish scales near the eyes; clypeus rufous, moderately concave, broad and arcuate at apex, the angles obtuse and blunt though evident, the sides thence to the base slightly converging, the scales attenuated, rather close-set, becoming smaller and dense laterally and apically; antennæ pale ferruginous, the club barely more than twice as long as the stem; palpi slender, testaceous; prothorax short, distinctly more than twice as wide as long, the margins strongly crenulate basally, broadly rounded and subprominent near the middle, thence equally converging to apex and base, feebly arcuate in the former, straight in the latter, sense; punctures moderate and sparse, the interspaces very shining; sparse yellowish scales large, very long, lanceolate, all decumbent and none pubiform, the surface completely without erect hairs, except at apex medially, where there are some distinct coarse erect hairs; median line and oblique sublateral vitta—present in basal half only—composed of large, more whitish and very dense lanceolate scales; scutellum with a parallel medial vitta of dense white scales, elsewhere broadly glabrous; elytra barely two-fifths longer than wide, fully two-fifths wider than the prothorax, rounding apically from slightly behind the middle, shining, barely at all rugulose, virtually smooth, with fine sparse punctures bearing long and gradually finely attenuate pale yellow scales, about four times as long as wide, the ragged dense vittæ and suture white; pygidium wider than long, triangular, feebly convex, the dense yellowish vestiture sparser narrowly along the median line centrally and also in a small area near each side; abdomen with close-set whitish scales, which become gradually denser toward the segmental apices; middle tarsi as long as the tibiæ. Length 24.5 mm.; width 11.0 mm. California (El Dorado Co.). A single specimen..... **sobrina** n. sp.

Form much stouter and of rather larger size, the integuments and vestiture similar in coloration, the elytral surface much more rugose and less shining; head unusually broad; vertex black, with strong

and slightly separated punctures, bearing long squamules and rather short, very sparse inconspicuous erect hairs, the surface squamose near the eyes; clypeus concave, very strongly, rather closely punctate, the apex broadly and subangularly sinuate, the angles well rounded, the sides thence to the base converging, the yellow scales long, attenuate, rather close-set, smaller, very dense and as usual more erect apically; antennal club missing in the type; prothorax not more than twice as wide as long, subtrapezoidal in outline, very much as in *arguta* but more broadly and strongly lobed at base; punctures rather coarse and strong, very close-set as a rule but sparse in an area near the median vitta anteriorly; scales yellow, all decumbent, long and finely attenuate, broad basally, narrower elsewhere and very small laterally, without trace of erect hairs at any part, the medial and sublateral vittæ broad, very dense and whitish, the latter broadly interrupted anteriorly; scutellum with a large medial dilated squamose area; elytra broad, not a third longer than wide, fully two-fifths wider than the prothorax, rapidly rounding behind in apical third; surface with large irregular smooth and punctureless rugosity at each side of the intervals, the intermediate regions with small and gradually attenuated, sparse yellowish scales, the dense sutural and less than usually ragged discal lines white, the second discal line broad, subinterrupted near basal third in the type; pygidium slightly wider than long, triangular, extremely densely clothed with yellowish squamules and short hairs almost throughout, the vestiture not closely decumbent and a little less dense along the middle; legs ferruginous. Length 26.5 mm.; width 12.2 mm. New Mexico (Jemez Springs),—Woodgate. The unique type is somewhat imperfect. . . . . **latifrons** n. sp.

22—Oblique dense line behind the humeral umbo disconnectedly prolonged posteriorly, the posterior part generally evident, though sometimes obsolete; this section includes the largest American species of the genus. 23

Oblique dense line behind the humeri never prolonged posteriorly. . . . 25

23—Antennal club enormously developed, longer than the head and prothorax and nearly seven times as long as the stem. Body very stout, oblong-oval, shining, castaneous in color; vertex and basal part of the clypeus with abundance of long erect coarse brown hair, the former with broad scales near the eyes; clypeus deeply concave, sparsely punctate and without scales basally, with close-set short stiff hairs or hair-like scales apically; apex broadly and feebly sinuate or faintly bisinuate, the angles generally well marked, sometimes everted and prominent, the sides parallel nearly to the base, then converging; antennæ dark brown; last palpal joint slender; prothorax short, much more than twice as wide as long, the sides obtusely and feebly subangulate near the middle; punctures rather coarse, very sparse, each partially filled by a large oval yellow scale, the scales becoming more slender laterally; median line subentire; sublateral vittæ and base toward the vittæ densely and more albido-squamose; erect hairs distinct toward the middle at apex; scutellum densely, rather narrowly squamose along the middle; elytra large,

a third longer than wide, much wider than the prothorax, the surface nearly smooth, only very faintly rugulose, the intervals finely and sparsely punctate, with the scales small, slender and yellow, the dense scales of the suture and four discal lines whiter; pygidium relatively rather small, triangular, clothed more or less sparsely throughout with pale yellowish scales; abdomen black, with numerous erect hairs and with small sparse scales, which are sometimes, but apparently not always, denser at the segmental apices; middle tarsi much shorter than the tibiæ. Length 32.5–34.0 mm.; width 15.5–16.5 mm. Mexico (Guadalajara). Two examples. [*Mel. leucogramma* Chev.] ..... ***petiti** Guér.

Antennal club not so greatly developed, never so long as the head and prothorax combined 24

24—Antennal club (♀) unusually developed, nearly as long as the entire stem. Body (♀) very large in size, broad, oblong-oval, convex, rather shining, castaneous in color throughout; vertex and clypeus coarsely and closely punctured, with many coarse, posteriorly reclining hairs and with coarse scales near the eyes; clypeus flat, gradually reflexed laterally, abruptly and moderately at the apical margin, the apex broadly bisinuate, the angles prominent and subacute, the parallel sides arcuate, the surface sparsely hairy, with a few intermingled scales, the latter smaller and closer apically; last palpal joint slender, much narrower than the preceding; prothorax large, rather more than twice as wide as long, the sides broadly, obtusely angulate just behind the middle, the base broadly and arcuately lobed; punctures rather coarse, irregular in distribution but in general rather widely separated, each with a broad elongate yellow scale, gradually becoming very small at the sides; at the middle of the apex there are some moderate erect hairs; median and broadly, anteriorly interrupted, sublateral vittæ of dense white scales well developed; scutellum broadly and densely squamose along the middle; elytra large, two-fifths longer than wide, a third wider than the prothorax, rounding apically behind the middle; surface rather smooth, only faintly rugulose, sparsely punctate and with sparse yellow scales, which are less than three times as long as wide; suture and four discal vittæ of dense scales white, the first discal somewhat irregular before the middle, the third fine and comminuted, short; pygidium about as long as wide, feebly convex, triangular, with large sparse lanceolate scales and rather long sparse erect hairs, the scales becoming narrower and dense near the basal margin; abdomen black, rufous apically, sparsely squamose, closely so toward the segmental apices. Length 36.0 mm.; width 17.8 mm.; length of antennal club 2.9 mm. One specimen, the type of the species.

Male nearly as large but not quite so stout as the female, similar in coloration and vestiture throughout, the clypeus a little longer, with denser scales, more truncate at apex, the angles right and blunt, the sides arcuate, more converging basally; antennæ brown, the club fully four times as long as the stem; prothorax similar but shorter, more than twice as wide as long; scutellum and elytra nearly as in the female, except that the dense whitish lines are narrower;

pygidium with rather more numerous scales and shorter erect hairs; middle tarsi much shorter than the tibiæ. Length 35.0 mm.; width 16.8 mm. One specimen.

Colorado (the female type described above) and New Mexico (Las Vegas,—a single male)..... **speciosa** Csy.

A—Female nearly as in the same sex of *speciosa* but not quite so large, the elytra black but sometimes concolorous and castaneous; sculpture and vestiture nearly similar throughout but differing in the antennæ; in *speciosa* the first joint of the club extends far beyond the middle of the outer five compact equal joints and its apex is gradually and acutely pointed, it being precisely similar on the two antennæ; in the present subspecies the club is barely longer than the stem without the basal joint, and its first joint is very short, quadrate, with its apex truncate and far from attaining the middle of the club proper; this formation of the club is practically constant throughout the five females at hand. Length 30.0–36.0 mm.; width 14.0–16.5 mm.; length of antennal club in the largest specimen 2.3 mm.

Male smaller than the male of *speciosa* and not so stout, the antennal club more than four times as long as the stem. Two specimens. Length 28.0–32.0 mm.; width 14.8–15.2 mm.

New Mexico (Jemez Springs),—Woodgate.... **acomana** n. subsp.

Antennal club (♀) scarcely more developed than in the *10-lineata* section. Body (♀) very much smaller and narrower than in either of the above forms, cylindric-oval, strongly shining, pale castaneo-rufous throughout, the abdomen not at all darker; legs and antennæ ferruginous; head short; vertex and occiput blackish, the former strongly, densely punctured and with some moderately long coarse erect brown hairs, densely albido-squamose toward the eyes; clypeus peculiar in sculpture, flat, strongly reflexed and broadly bisinuate at apex, the reflexed edge rather prominent medially, the angles right, blunt, the sides parallel, the surface with rather coarse, shallow, remotely and irregularly distributed punctures throughout, some bearing long scales and some erect hairs; last palpal joint slender but not narrower than the preceding, antennal club as long as the three preceding joints, its first joint on the left antenna of the single type specimen short, quadrate, extending to the middle of the next joint, with its apex rectilinearly truncate, the formation as in *acomana*; on the right antenna, however, this first joint of the club is much longer, extending with full width to apical fourth, connate with the next joint and with its apex broadly subangulate; this joint, in spite of its virtual constancy on all the antennæ of the five females of *acomana*, is therefore subject to singular variation, and may be unreliable as a specific criterion, or, as this short first joint of the club on the right antenna is connate with the next joint throughout its surface, it may be counted simply as an accidental malformation, not affecting the value of the character in its normal development; prothorax twice as wide as long, strongly prominent and angulate at the sides, twice as wide as long, very shining, with sparse shallow punctures containing broadly rounded scales, the

three pale vittæ distinct, the sublateral diffuse before the middle; stiff erect hairs rather numerous at apex medially; scutellum narrowly and densely squamose along the middle; elytra rather smooth, very shining, scarcely rugulose but with long and irregular, coarsely impressed creases, very sparsely punctulate, the yellowish squamules very small; suture and four lines of dense white scales not very broad, the third visible only in two or three places; pygidium narrow, apparently longer than wide, very convex, shining, having very small, remotely scattered scales, but without trace of erect hairs, having a broad glabrous median line; abdomen sparsely hairy, with a few scales; tarsi slender. Length 25.5 mm.; width 11.0 mm. Honduras, Wittkügel..... *concurrens Csy.

25—First tooth of the anterior tibiæ (♀) well developed, at least half as high as the third.....26

First tooth of the anterior tibiæ (♀) very small though acute*.....29

26—Female with the hind tarsi unusually long, nearly as long as the tibiæ. Body broadly oval, black, very closely clothed throughout with conspicuous yellowish scales, which are dense and pure white in the broad and conspicuous vittæ; head broad, the vertex with dense white scales toward the eyes and a more yellowish central cluster, also with moderately numerous, not very long erect hairs; clypeus with the reflexed apex bisinuate, the sides parallel, the surface clothed almost evenly and closely throughout with large scales, the punctures even and coarse; erect hairs wholly wanting; antennal club as long as the three preceding joints; prothorax rather more than twice as wide as long, obtusely prominent at the sides, unusually convex between the broad dense vittæ, all three of which are entire; punctures rather coarse, irregular in distribution, in some places rather dense, in others sparsely scattered, all bearing very large pointed scales, generally about twice as long as wide, smaller but subsimilar laterally; erect hairs wanting, except a few short and stiff on the apical edge medially; scutellum densely clothed with white scales, the periphery throughout, except toward the middle of the base rather broadly glabrous; elytra oval, widest at the middle, thence rounding gradually behind, the apex not broadly obtuse, evenly rounded, two-fifths longer than wide and two-fifths wider than the prothorax, the intervals not rugose, rather dull, closely punctate, clothed with broad close-set scales to the edges of the broad white vittæ, the scales between two and three times as long as wide; pygidium relatively moderate, but little wider than long, triangular, convex, extremely densely clothed throughout with small suberect overlapping whitish scales; legs and antennæ ferruginous. Male not known. Length 30.0 mm.; width 15.0 mm. California (without more definite record)..... **squamotecta** n. sp.

Female with the hind tarsi shorter, always very much shorter than the tibiæ, a little longer in the male.....27

27—Female with the hind tarsi shorter than in any other species, about

* This character is so evidently definitive in the two large species possessing it, that I feel inclined to make use of it, although the female of a number of forms placed in and apparently belonging to the previous division, is not known at present.

three-fifths as long as the tibiæ, the pygidium more transverse than usual, subglabrous apically, the small broad scales closer but still well separated basally and with a broad glabrous median line, closed basally and slightly concave near the base. Body black, the prothorax rufous, the legs ferruginous; head short and broad, the punctures rather smaller than usual and larger and smaller are intermingled; vestiture largely removed in the type but densely squamose toward the eyes and sparsely squamose on the short truncate clypeus; antennal club as in the preceding; last palpal joint smaller; prothorax a little more than twice as wide as long, broadly angulate at the sides behind the middle, coarsely, sparsely punctate throughout, each puncture with a rather small scale, larger along the base and in the dense white vittæ, the medial of which is impressed, the sublateral represented only by a large area behind the middle and not attaining the base; scutellum densely squamose, broadly glabrous laterally; elytra oblong, more broadly and obtusely rounded behind in apical third, two-fifths wider than the prothorax, the surface rather strongly rugulose, finely, somewhat sparsely punctate and with broad yellowish-white scales, not extending quite to the rather narrow dense white lines, the scales but little over twice as long as wide; apex of the abdomen rufous. Male unknown. Length 25.0 mm.; width 12.8 mm. California (without further record). **pacifica** Csy.

Female with the hind tarsi slightly less abbreviated, two-thirds to three-fourths as long as the tibiæ; pygidium densely clothed virtually throughout in both sexes; elytral scales variable within the species but never so broad as in the two preceding. 28

28—Body smaller in size and with moderate and truncate clypeus. Form subcylindric, black to dark castaneous, the scattered squamules yellowish, the dense vittæ white; head moderate, the vertex strongly punctate, with some short erect hairs and scattered lanceolate scales, the latter dense toward the eyes as usual; clypeus with long attenuate yellow scales, close-set basally, very dense apically, the angles right and rather blunt, the sides subparallel; antennæ pale, the club between three and four times as long as the stem; last palpal joint rather long and slender, narrower than the preceding; prothorax twice as wide as long, rather broadly and only feebly prominent at the sides submedially, strongly and rather closely but irregularly punctate, the punctures bearing long and gradually very attenuate yellow scales, sometimes broader and occasionally very narrow or hair-like throughout, always closer basally, the white vittæ narrow, the sublateral interrupted near the apex; scutellum densely squamose, with more or less broad glabrous margins; elytra nearly one-half longer than wide, a fourth wider than the prothorax, the surface of the intervals feebly rugose and with slender and rather close-set yellow squamules, the surface becoming smoother, somewhat embossed as a rule and glabrous near the narrow dense white lines; pygidium but little wider than long, equilatero-triangular, moderately convex, densely clothed with small and very sharply attenuate whitish scales; abdomen more or less rufous apically, the scales sparse, becoming

dense at the segmental apices as usual. Length 25.0–27.0 mm.; width 12.0–13.0 mm. Six specimens.

Female nearly like the male but more ventricose, the prothorax relatively smaller, the clypeus very much shorter and with more rounded angles but deeply concave; antennal club small, only about half as long as the stem; pygidium not quite so densely squamose. Length 26.0 mm.; width 12.8 mm. One example.

New Mexico (Jemez Springs and Las Vegas) and Colorado (Salida). Kansas (Platte River),—Say..... **decemlineata** Say

A—Form narrower than in the preceding and rather smaller in size, black, almost similarly clothed, except that the scales are much more numerous throughout on the vertex and the erect hairs there more abundant and longer; prothorax nearly similar throughout; scutellum squamose almost throughout, less densely toward the sides, glabrous at apex; elytra narrower but otherwise similar, the narrow dense white lines bordered at each side by still more conspicuous smooth glabrous lateral margins of the intervals; pygidium with a very dense covering of small pointed white scales, mixed sparingly with minute hairs, the median line narrowly glabrous, except at base and apex; abdomen intense black throughout; legs unusually slender, ferruginous, the femora piceous; middle tarsi evidently shorter than the tibiæ. Female not known. Length 23.0 mm.; width 10.5 mm. Wyoming. One specimen. **parilis** n. subsp.

B—Form almost exactly as in *parilis* but with more yellowish dense vittæ, black throughout, the legs red-brown, the antennæ dark brown; head as in *parilis*, the antennal club a little shorter and thicker, not quite three times as long as the stem; prothorax similar in general outline but still shorter, much more than twice as wide as long, the vestiture sparse and composed of very broad scales, about two and one-half times as long as wide, sharply pointed, the dense vittæ similar, the punctures much smaller; scutellum densely squamose, except at the sides; elytra throughout nearly as in *parilis*; pygidium very different, larger, much wider than long, similarly very densely squamulose throughout, more sparsely and with some intermixed whitish hairs apically, but without trace of the narrow glabrous line of *parilis;* abdomen black throughout; middle tarsi slightly shorter than the tibiæ. Female unknown. Length 23.0 mm.; width 10.5 mm. Nevada. **laticauda** n. subsp.

C—Form more oval than in *10-lineata* and decidedly smaller in size, dark castaneous, the prothorax dark rufous, the abdomen black, pallescent at tip; sparser vestiture pale yellow, the dense vittæ pure white; head moderate, the vertex with numerous rather long erect hairs and scattered scales, the latter dense toward the eyes; clypeus truncate, with parallel sides and blunt angles, shallowly concave, rather evenly and closely clothed with finely attenuate scales, gradually dense apically; antennal club barely over two and one-half times as long as the stem, pale brownish-yellow; prothorax nearly as in *10-lineata* but less sparsely punctate;

scutellum in great part squamose; elytra slightly inflated behind the middle and a third wider than the prothorax, rather smooth, the punctures somewhat close-set and bearing small slender yellowish squamules, which extend to the dense white vittæ and not separated therefrom by glabrous lines as in the preceding forms; pygidium small, equilateral, having small close-set whitish squamules, largely replaced by very fine hairs along the median line, these fine brown hairs also very distinct throughout and not visible in *10-lineata;* legs rather short; middle tarsi much shorter than the tibiæ. Female not known. Length 22.0–22.5 mm.; width 10.4–10.7 mm. Washington State. Two examples.

reducta n. subsp.

Body large in size and with a much broader bisinuate clypeus. Form oblong-oval, piceous-black, the prothorax bright rufous; abdomen black; vestiture abundant, very pale yellowish, the dense vittæ white; head large, short; vertex with many erect hairs and scattered scales, which are dense and whiter laterally; clypeus nearly two and one-half times as wide as long, parallel and nearly straight at the sides, the angles right and blunt, the apex feebly bisinuate, the surface concave, with close-set broad pointed scales, becoming much smaller and denser apically; antennal club pale, three times as long as the stem; prothorax very short, two and one-half times as wide as long, very broadly and rather feebly lobed at base, angularly prominent at the sides, the punctures only moderately coarse, rather close-set and very shallow, each with a broad pointed scale, gradually smaller but otherwise similar laterally and between two and three times as long as wide, the three white vittæ distinct, the sublateral broadly interrupted before the middle; scutellum densely squamose, broadly glabrous laterally and apically; elytra feebly rugulose, closely punctate and with close-set slender pale yellowish lanceolate scales, three to four times as long as wide, the part adjacent to the rather broad white vittæ smoother and glabrous; pygidium but little wider than long, very moderate in size, extremely densely clothed throughout with very small and finely pointed whitish scales; legs rather slender, the femora pale rufous, the remainder rather darker. Length 28.0 mm.; width 13.0 mm. One example.

Female nearly like the male but a little larger and broader, the elytra similarly arcuately narrowing behind from near the middle; clypeus shorter, three times as wide as long, the apex more strongly bisinuate, the sides parallel and arcuate and the angles more distinct, the surface flat, abruptly reflexed at apex, similarly squamose; antennal club small, barely more than half as long as the stem; prothorax as in the male but less abbreviated, but little more than twice as wide as long, the punctures similarly rather close-set and notably shallow, the depressed scales and vittæ similar; scutellum less broadly squamose medially; elytra a little shorter and broader, similarly with broad dense white vittæ and close-set yellowish interstitial squamules; legs stouter as usual. Length 29.0–30.0 mm.; width 14.0–14.4 mm. Two examples.

California (Los Angeles Co.).....**ruficollis** n. sp.

A—Female differing from the female of *ruficollis* in being slightly more elongate and convex, uniformly castaneous in color throughout, the pale vittæ slightly yellowish—perhaps accidentally;—clypeus similar but with the parallel sides straight and not arcuate and the surface clothed much more sparsely with very much smaller and more slender yellow squamules; antennæ dark brown, the club only half as long as the stem; prothorax similar in general outline but narrower, scarcely twice as wide as long, the rather coarser punctures much deeper, the squamules narrower, becoming very fine laterally, the vittæ similar but narrower; scutellum similar; elytra rather more cylindric, feebly inflated behind the middle, more rapidly rounding and obtuse at apex, relatively still much wider than the prothorax, the dense lines narrower, the squamules of the intervals very much finer and more hair-like; pygidium nearly similar but not quite so densely squamulose; at the centre, in the type, there is a point from which the squamules radiate; hind tarsi three-fourths as long as the tibiæ. Male unknown. Length 31.0 mm.; width 14.3 mm. California (without further record, but probably southern).....**castanea** n. subsp.

B—Male oblong, piceous-black, the prothorax, clypeus and legs pale rufo-ferruginous, the antennæ more yellowish; sparse vestiture yellow, the dense lines white; head and clypeus strongly and closely punctate; vertex with moderate erect hairs and lateral dense white scales; clypeus large, the apex broadly, evenly arcuate viewed dorsally, very faintly bisinuate viewed postero-obliquely, the angles rounded; sides feebly converging basally, more constricted near the base; surface moderately concave, without trace of hairs, having long and finely attenuate abundant scales, becoming very small and dense apically; antennal club four times as long as the stem; prothorax slightly more than twice as wide as long, the sides broadly and feebly prominent submedially, almost evenly and feebly arcuate and gradually converging from base to apex from a dorsal viewpoint; surface without trace of erect hairs at any point, the punctures coarse, uneven and notably sparse throughout, each with a fine hair-like scale, the vittæ distinct, the sublateral broadly interrupted before the middle; scutellum broadly and densely squamose and with scattered scales thence to the sides; elytra rounding behind in less than apical third, a fourth wider than the prothorax, the scattered squamules fine and hair-like, abundant, not quite reaching the solid white lines; pygidium with very small dense yellowish squamules, sparser apically and with a narrow glabrous line from basal to apical fourth; middle tarsi a little shorter than the tibiæ, equal to the posterior in actual length. Length 29.0 mm.; width 13.2 mm. One example.

Female slightly more oval than the male, similar in coloration, the clypeus shorter, nearly three times as wide as long, the apex arcuato-truncate viewed dorsally, feebly bisinuate viewed obliquely from the rear, the sides parallel and feebly arcuate, the surface flatter, reflexed abruptly at apex, clothed similarly closely

with rather smaller squamæ, which are not denser apically; antennal club rather more than half as long as the stem; prothorax similar but not quite so short and rather more prominently angulate at the sides, the punctures coarse, irregular and sparse, each with a pointed scale, which is nearly three times as thick as in the male, the dense white vittæ similar; elytra nearly as in the male, except that the squamules are shorter and notably broader; pygidium nearly similar, without smooth line in one example and with a broad glabrous line from near the base to the apex in the other. Length 27.0–28.0 mm.; width 13.4 mm. Two specimens.

Oregon (Corvallis),—Moznette.....**oregona** n. subsp.

C—Male larger and more elongate than in *oregona*, narrower and more cylindric than in *ruficollis*, black, the clypeus rufescent, the pronotum outside of the lateral vittæ, the reflexed bead of the elytra, abdominal tip, legs and antennæ, rufous; vestiture fine, yellowish, the dense lines white; head broad, the vertex deeply, not very closely, the clypeus less strongly, loosely punctate, the former with numerous fine long erect hairs and some scales near the eyes, the latter moderately concave, the apex transverse, broadly, subangularly sinuate at the middle, the angles rounded, the sides converging thence to the base, the vestiture composed entirely of very fine hairs, smaller, denser and with some that are narrowly squamiform laterally and apically; antennal club fully four times as long as the stem; prothorax barely twice as wide as long, obtusely and subangularly prominent submedially at the sides, strongly but subevenly arcuate throughout viewed vertically, the punctures coarse, irregular, close-set to sparse at various points, but little smaller laterally, each with a rather long stout inclined hair, not in the least squamiform, those near the middle of the apex a little longer and more erect; vittæ narrow, the lateral broadly interrupted before the middle; scutellum broadly squamose medially and elsewhere with a few scattered scales; elytra large and long, one-half longer than wide, rapidly rounding in less than apical third, the sides parallel, two-fifths wider than the prothorax, which is relatively smaller than in *oregona;* vestiture rather abundant, consisting of small stout decumbent hairs, not at all squamiform and not quite spreading to the dense white lines; pygidium as long as wide, the apical angle rather rounded, the surface finely, strongly, densely punctate throughout, except in a narrow glabrous unentire median line, densely clothed with fine, brown hairs, becoming largely slender yellow squamules basally; middle tarsi much shorter than the tibiæ. A second male is quite different from the type in many respects; the elytra are rather less elongate and the scattered vestiture is sparser and has the form of narrow and gradually attenuate yellow scales; the pronotal vestiture is nearly similar but on the clypeus there are many rather large broad scales. Length and width of type specimen 30.0 by 13.5 mm.; length of elytra 22.0 mm.; length of elytra of second example 20.0 mm., the total length 29.0 mm. Washington State (Friday Harbor).....**perversa** n. subsp.

29—Form oblong-suboval, black throughout, the legs and antennæ red and yellow ferruginous respectively; decumbent sparse vestiture pale yellow, the dense vittæ white; head short, coarsely and deeply punctate throughout, the vertex with rather abundant erect hair and with dense whiter scales near the eyes; clypeus deeply concave, clothed with long attenuate scales, some very broad along the base and with smaller very dense scales laterally and apically, the apex feebly, subangularly sinuate medially, the angles rounded, the sides thence converging to the base; antennal club between three and four times as long as the stem; prothorax barely twice as wide as long, the sides broadly and feebly subprominent submedially from a dorsal viewpoint, more strongly angulate viewed obliquely; punctures coarse, deep, close-set or sparse at various points, each with a very slender hair-like scale, a little broader near the base, without erect hairs, the vittæ moderate, the sublateral broadly interrupted before the middle; scutellum broadly, densely squamose along the middle; elytra rounding behind in apical two-fifths, a third wider than the prothorax, the squamules rather well separated, three to four times as long as wide, separated from the dense white lines by a distinct glabrous interval; pygidium but little wider than long, nearly flat, triangular, very densely clothed with small whitish squamules, mingled with minute and more erect hairs, the squamules nearly wanting along the median line, the sparse hairs remaining, also rather sparser laterally; middle tarsi about as long as the tibiæ. Length 26.5–31.0 mm.; width 13.0–14.8 mm. Six specimens.

Female nearly similar to the male, with the usual sexual differences, the clypeus shorter and much less concave, the antennal club barely more than half as long as the stem; prothorax not quite so short and with the punctures still coarser and generally denser, the squamules not so slender; scutellum similar; elytra rather broader and more sensibly subinflated posteriorly, the vestiture nearly as in the male; pygidium almost exactly as in the male, the squamules rather less slender; the first tooth of the anterior tibiæ is distinct but barely a third as high as the second. Length 29.0–34.0 mm.; width 14.3–16.3 mm. Two specimens.

Mexico (San Luis Potosi)..... ***potosiana** n. sp.

Form (♀) stouter, oblong-oval, dark castaneous in color throughout, the abdomen not black; integuments rather shining; scattered vestiture yellow and squamiform; head short and broad, the vertex coarsely and deeply punctate, the erect hairs very short and sparse, the scales dense medially, toward apex and near the eyes; clypeus abruptly reflexed at apex, three times as wide as long, the apex arcuato-truncate from a dorsal, broadly bisinuate from a posteriorly oblique, viewpoint, the angles distinct, not rounded, the sides subparallel, feebly arcuate, the surface strongly, closely punctate and with narrow pointed yellow scales throughout; antennal club not so thick as usual and three-fifths as long as the stem; prothorax twice as wide as long, broadly angulate at the sides, the angle still visible from a vertical viewpoint, the sides parallel and feebly sinuate basally in the latter case; punctures rather coarse, deep and close-

set, sparse anteriorly toward the middle, each puncture with a scale, small and hair-like laterally, broad and pointed basally, the vittæ as in the preceding, except that at the middle of the medial vitta, in the type, there is a point from which the scales radiate; scutellum as in the preceding; elytra two-fifths longer than wide, two-fifths wider than the prothorax, arcuately rounding posteriorly behind the middle, the scattered scales numerous, not quite spreading to the white vittæ, lanceolate, three times as long as wide; pygidium as in the preceding, except that the scales are smaller and stouter and the minute hairs still smaller; first tooth of the anterior tibiæ very small, almost vestigial. Male not known. Length 31.0 mm.; width 15.4 mm. Arizona (Oak Creek Cañon),—Snow. A single specimen.

matrona n. sp.

30—Body rather narrow, subcylindric, feebly shining, pale reddish-brown in color, the vestiture white; head relatively large, rather finely and not at all closely punctate, the clypeus more coarsely than the vertex and both loosely clothed with moderately long stiff decumbent yellowish hair, denser but not in the least squamiform near the eyes; clypeus broad, feebly concave, arcuato-truncate at apex, with distinct but narrowly rounded angles and subparallel sides; antennal club between two and three times as long as the stem; penultimate palpal joint longer than in the western species; prothorax twice as wide as long, broadly and angularly prominent at the sides, rather finely, closely and evenly punctate and subevenly clothed with stiff decumbent yellow hairs, becoming dense and whitish but not at all squamiform along the median line, sometimes denser near lateral fourth behind the middle, but never forming a distinct vitta; erect hairs completely wanting; scutellum closely and uniformly clothed with shorter, whiter and more squamiform hairs; elytra nearly one-half longer than wide, barely visibly wider than the prothorax, rounding in apical third, feebly rugulose, finely, rather closely punctate, the vestiture yellowish, consisting of small fine decumbent and well separated hairs, which become gradually aggregated into a sutural and three discal lines of slightly longer thicker and white hairs of the same kind, these lines rather inconstant, the inner more or less oblique and one or all may become obsolete; pygidium rather small, equilatero-triangular, densely clothed throughout and evenly with short yellowish hairs and many long erect hairs; abdomen with the small slender decumbent hairs denser toward the segmental apices; middle tarsi distinctly shorter than the tibiæ. Length 22.0–22.5 mm.; width 9.5–10.5 mm. Five specimens.

Female similar to the male in general color, sculpture and vestiture but a little stouter and more oval, the elytra slightly inflated post-medially; head similarly sculptured but more sparsely clothed, the clypeus shorter and with very broadly rounded angles; antennal club barely more than half as long as the stem; prothorax nearly similar but rather less finely or closely punctate and with the vestiture a little sparser and coarser; elytra nearly similar in ornamentation, the white vittæ rather more constant; pygidium nearly similar;

anterior tibiæ bidentate. Length 23.0–24.5 mm.; width 10.5–11.0 mm. Five specimens.

Virginia (Hampton Roads), North Carolina (Southern Pines) and Florida (Jacksonville).....**occidentalis** Linn.

31—Form cylindric-oval, strongly convex, shining, pale red-brown in color, the under surface and pronotum sometimes largely black, the vestiture consisting of minute sparse yellowish hairs and irregular condensations of hairs generally white but sometimes yellow on the elytra; vertex not very coarsely, rather sparsely punctate and clothed throughout with a loose mixture of subdecumbent and erect hairs of moderate length, a little coarser and usually whiter near the eyes; clypeus twice as wide as long, rather strongly to finely and closely punctate, moderately concave and clothed with rather short prostrate hairs, the apex broadly arcuate to feebly obtusely angulate, the angles rounded, the sides more or less feebly converging thence to the base; antennal club notably small, feebly reflexed apically, about three-fourths longer than the stem; last palpal joint slender, with an elongate external impression, not observable in any of the preceding species; prothorax somewhat more, to slightly less, than twice as wide as long, the sides obtusely and feebly prominent medially; punctures relatively fine and very irregularly distributed, generally sparse, a little stronger and less sparse anteriorly, the sparse vestiture of decumbent hairs becoming closer to dense along the median line and sometimes near the sides, the usual partial sublateral vittæ sometimes faintly indicated; erect hairs usually wanting, though sometimes evident anteriorly toward the middle; scutellum clothed with prostrate hairs, sometimes entirely, but often only along the middle; elytra a little less than one-half longer than wide, a third wider than the prothorax, rounding behind in apical third or more, the dense hairs along the suture and forming the very irregular spots coarse and subsquamiform, the other hairs sparse, short and fine; pygidium equilatero-triangular, convex, clothed not densely but abundantly with minute slender decumbent hairs, without erect hairs; abdomen concolorous, the segments subglabrous toward their bases; middle tarsi as long as the tibiæ to distinctly shorter. Female not at hand but, according to Horn, having the clypeus very short and the sexual characters as in *10-lineata*. Length 20.0–24.0 mm.; width 8.5–11.5 mm. Maine and Lake Champlain to southern New Jersey. The male abundant at times.....**variolosa** Hentz

Form oblong-oval, the size much larger; coloration as in *variolosa* and similarly variable, the vestiture nearly similar, the prostrate hairs a little shorter and thicker; clypeus nearly similar but with the decumbent hairs much less uniformly distributed, being very sparse in basal and dense in apical half; antennal club differing greatly, being as large as in *10-lineata* and between three and four times as long as the stem, much more strongly reflexed distally; last palpal joint flattened but not impressed externally; prothorax short, more than twice as wide as long, the sides obtusely prominent just behind the middle, the punctures nearly as in the preceding but still sparser and more irregularly distributed, the hairs coarser, distinctly squamiform

in the sublateral condensations and along the very dense median line; erect hairs wholly wanting; scutellum almost glabrous, narrowly and densely squamulose along the middle but not to the apex; elytra broader than in *variolosa*, two-fifths longer than wide, a fourth wider than the prothorax, more rugose than in the preceding, the decumbent short hairs white throughout, dense and evidently squamiform along the suture and in the scattered irregular clusters, in which, similarly, a vague lineal arrangement can be seen occasionally, very sparse but coarse elsewhere; pygidium and abdomen nearly similar; middle tarsi slightly shorter than the tibiæ. Length 25.0–25.5 mm.: width 11.5–12.3 mm. Kentucky. Three male examples.

comes n. sp.

32—Body of very small size and rather slender, moderately convex, subcylindric form, rather shining, pale castaneous in color, the abdomen blackish but paler apically; vestiture nearly as in the preceding species, white throughout; vertex sparsely clothed with moderately long subdecumbent, and but little longer erect, hairs, those near the eyes feebly squamiform; clypeus less than twice as wide as long, moderately concave, broadly sinuate at apex, with rounded angles and nearly straight subparallel sides, very sparsely clothed with stout decumbent hairs, smaller and denser apically, except toward the sides, antennal club slender, only feebly reflexed distally, a little more than twice as long as the stem; last palpal joint long and slender, with an elongate flat area on the outer side; prothorax short, more than twice as wide as long, the sides very obtusely and moderately prominent medially; surface feebly rugulose, subevenly, not very sparsely and moderately punctate, rather coarsely anteriorly, the decumbent vestiture in the form of elongate lanceolate scales, with a few minute hairs intermingled, dense along the median line and more broadly, less densely aggregated in the usual sublateral vittæ, which are very irregular; scutellum squamulose throughout; elytra nearly one-half longer than wide, only slightly wider than the prothorax, rapidly rounding behind to the very obtuse apex, the suture with slightly elevated margins but not in the least more densely squamose, the irregular patches of dense white lanceolate scales sometimes having a faintly lineate arrangement; surface rugose, the punctures coarsely impressed; pygidium nearly as in *variolosa;* middle tarsi not as long as the tibiæ. Length 18.5–19.0 mm.; width 7.7–8.0 mm. Three examples.

Female slightly stouter and more inflated posteriorly than the male, with still somewhat shorter prothorax but otherwise almost as in the male, except the head, which is shorter and relatively much broader, the clypeus differing remarkably, being more than twice as wide as long and regularly trapezoidal in form, the arcuate apex scarcely more than three-fourths as wide as the base, the sides straight, the angles moderately rounded; vertex much more coarsely and densely punctate than in the male; last palpal joint much smaller, very slender, with the outer flattened area much reduced; antennal club small, scarcely more than half as long as the stem; pygidium less evenly clothed and more densely, except toward the sides; tibiæ, as

usual, much less slender. Length 19.5 mm.; width 9.0 mm. One specimen.

Florida (locality not recorded).....**gracilis** Horn

The descriptions of *cavifrons*, *subvittata* and *crinita* of LeConte, are drawn from the original diagnoses in each case (Journ. Acad. Phila., 2nd series, vol. 3, pp. 229–230). The name *crinita* is now generally applied to the smaller species, with small antennal club, from the more southern parts of California and named *incolumis* above, while only the larger and more northern forms, with large antennal club like that of *10-lineata*, were intended by the author to bear that name. Doubtless a number of species were confused with both *crinita* and *10-lineata* by LeConte and Horn, and the only safe course, because of possible subsequent accidental shifting of type labels, is to go to the original descriptions. In the case of *10-lineata*, I have chosen a form agreeing exactly with Say's description in form, color, ornamentation and size of the body. In that of *hammondi* Lec., the identification from the Kansas specimens admits of no doubt and the above description is therefore taken from that series.

The forms of the *10-lineata* section are numerous and very confusing, owing to mutual similarities of organization, combined in certain cases with a peculiar inconstancy in the form of the scattered squamules, as noted under that species; in *oregona* these inconsistencies may be sexual to some extent. Some large and conspicuous species of this section, such as *potosiana* and *matrona* seem to be well differentiated by the tibiæ of the females; these inhabit the more southern Sonoran faunal regions. After separating these and two rather distinct and probably local species, *pacifica* and *squamotecta*, of the California fauna, there remain a considerable number of less accentuated forms, which are usually mingled together under the name *10-lineata* Say; but after reasonably close and attentive study, these forms can readily be seen to fall into two distinct groups, one inhabiting the Rocky Mountain system, extending to the northwest into Washington State, having the body smaller and the clypeus narrower and more truncate, and the other confined to the true Pacific coast fauna, much larger in the body and with broader and less evenly truncate clypeus. There can be scarcely any doubt that these groups represent two distinct

species, *10-lineata* and *ruficollis*, to which the related forms may be attached as subspecies. In some cases, such as *reducta*, *laticauda* and *perversa*, I am of the opinion that they are rather specific in value than subspecific, but have tried to simplify the subject as much as possible by considering them all as subspecific provisionally. These remarks also apply in large degree to the *crinita* section. In regard to the other forms described above, there could be no hesitation in determining the proper taxonomic status.

Occidentalis is a very remarkable and isolated species, in having the anterior tibiæ wholly unaffected sexually. *Variolosa* seems at present to be in process of segregation into incipient species or subspecies; the forms from the extreme southern part of its range, near Atlantic City, have the diffused vestiture longer and closer, giving a more pruinose appearance and one from Old Orchard, Maine, is much larger than the others; some have no vestige of erect pronotal hairs, while in others these are very evident on parts of the surface; one example has the pronotum and entire under surface black, the legs piceous. In another specimen there is a distinct vestige on the anterior male tibiæ of the first tooth of the three characterizing the *cavifrons* group. *Comes* is widely different and could not be confused with *variolosa* in any way, but represents that species on the western slopes of the Appalachian system.

The intromittent spicule in this genus is radically different from that of *Thyce;* in *oblita*, for instance, the two symmetrical, finely and longitudinally divided sections form a parallel rectilinear piece, transversely, feebly convex and moderately bent downward apically, the combined apex broadly arcuate horizontally; beneath, the combined halves are deeply concave; there is no locking arrangement visible, except the deflexed apex.

I have seen nothing at all resembling the very small Mexican *conspersa* Burm., which is of such peculiar organization as to call its generic assignment somewhat into question.

V—MISCELLANEOUS NOTES AND NEW SPECIES.

In a recent rearrangement of the Cryptophagidæ of my collection, the following synonymy became apparent:

Salebius montanus Csy.—(Journ. N. Y. Ent. Soc., VIII, p. 91), should be united with *lictor* Csy. as a synonym.

Cryptophagus cribricollis Csy.—(l. c., p. 97), should be united with *inscitus* Csy., as a synonym.

In the Buprestidæ the following synonymy is noted:

Buprestis flavopicta Csy.—(Proc. Wash. Acad., XI, p. 97) should be united with *consularis* L.-G.

Buprestis virens Csy.—(l. c., p. 105) is the female of *rufipes* Fabr.

Buprestis inconstans Mels., and *deficiens* Csy. (l. c., p. 91) should both be united with *maculipennis; fusiformis* Csy., is I think distinct.

Buprestis punctiventris Csy.—(l. c., p. 99) should be united with *subornata* Lec.

Buprestis fulgens Csy.—(l. c., p. 107) is a variety or subspecies of *fasciata* Fabr.

Buprestis oregona Csy.—(l. c., p. 113) should be united with *incolumis* Csy., as a subspecies of *langi* Mann.

Dicerca inflatula Csy.—(l. c., p. 140) should be united with *abrupta* Csy.

Dicerca hesperica Csy.—(l. c., p. 155) is to be united with *crassicollis* Lec., as a synonym and not a subspecies.

The genus *Texania* Csy.—not "*Texiana*" as written by M. Kerremans—is probably a synonym of *Chalcophorella* Kerrem.

Chalcophora iridescens Csy.—(l. c., p. 82) should be united with *georgiana* Lec.

Chalcophora obliterata Csy.—(l. c., p. 79) placed as a synonym of *virginiensis* by M. Kerremans, is quite certainly a rather well defined variety and not truly a synonym.

Chalcophora brevicollis Csy.—(l. c., p. 79) is not a synonym of *lacustris* Lec., as placed by the above author, but is a distinct species, as may easily be seen on viewing the rather extensive series of each in my collection. The prothorax in *lacustris* is always more narrowed anteriorly and less abbreviated than in *brevicollis*, among other differences. I think also that *montana* Csy., is a good subspecies of *angulicollis* and not a synonym, as stated by Kerremans in his monumental work on the Buprestidæ.

It is almost certain that the locality "Florida" for *Chalcophora prominens* Csy., is a mistake; it is purely of a northern Pacific coast type and in fact I have recently received another example, agreeing very well with the type, marked "British Columbia."

The genus *Paramallus* Csy.,—(Mem. Col. III, pp. 222, 227) is a synonym of *Archodontes* Lameere (1903), and the subgenus *Riponus* Csy.,—(l. c., p. 245) is a synonym of *Neopolyarthron* Semen. (1899).

In Mem. Col. IV, p. 5, in the 3d line under "*Longilabris* group," for "*spinitarsis*" read *spissitarsis* and on page 127, 13th line from bottom for "**pumilis**" read **pumilus**.

In Mem. Col. IV, p. 47, for "*Notiophilus evanescens* n. sp.," read *N. simulator* Fall, and, on page 347, for "*Pogonocherus emarginatus* n. sp.," read *P. pictus* Fall. I regret very much overlooking Mr. Fall's papers published in "Psyche," and have therefore unnecessarily increased the burden of synonymy.

On page 42 (ante) for MICRATOPINI read MICRATOPINÆ.

It is highly probable that *Cymindis atrolucens* Csy.,—(l. c., p. 178) is merely one of the numerous varietal forms of *Pinacodera atrata* Chev. It was originally described by Chevrolat under the name *Cymindis atrata*, which name conflicting with *atrata* Dej., was changed by Dejean to *chevrolati*, a fact that seems to have been overlooked by Bates in compiling the synonymy of *Pinacodera atrata* for the "Biologia." It was afterward described by Chaudoir under the name *Cymindis nigrita*. Although differing in some respects from both *Cymindis* and *Pinacodera*, I think it is more closely allied to the former than to the latter, especially in its general habitus. A very good figure is given in the "Biologia," which I unfortunately overlooked, owing to the generic name used by Bates, following Chaudoir.

In addition to two or three apparently undescribed species, which it is intended to make known at some future time, the series of Harpalinæ sent by Mr. Knaus, alluded to in the footnote on page 303, furnishes additional localities for a number of species. *Geopinus fluviaticus* is represented from Kansas, *Nothopus valens* from Medora, Ks., *Harpalus furtivus* from Wooten's, N. M., *H. lustrans* from Dodge City, Ks., *H. lividulus* from New Mexico and *herbivagus* from Kansas, *H. desertus* from Colorado and *H. renoicus* from Stockton, Utah; also *Selenophorus houstoni* from Waco, Tex., *S. implicans* from Brady, Tex., and *S. famulus* from the Baboquivari Mts., in southern Arizona; further *Stenomorphus scolopax* from McPherson, Ks., *Agonoderus lineola*, Stockton, Ut., *Stenolophus semitinctus* from the type locality, El Paso, Tex., and *St. captiosus* from

McPherson, Ks. Finally there is a specimen of what seems to be typical *Anisodactylus oregonus* Csy., from Cœur d'Alene, Idaho, collected by Wickham, and a rather aberrant example of *A. cœnus*, of peculiar steel-blue lustre, from McPherson, Kansas; also, from the latter place, there is a single specimen of *Stenocellus congener* Lec.; this species has a much smaller head and somewhat smaller prothorax than *rupestris* and can be distinguished from it very easily.

On further consideration, it becomes evident that *Omus lucidicollis* Csy., reduced to synonymy on page 7 (ante), has not truly that status, but is a variety of *lobatus*, and further material in the neighborhood of *horni* Lec., given me a few days ago by Mr. E. D. Harris, proves that *collaris* Csy., is not the same as *horni*, the latter being a shorter, stouter and much more thick-set form.

CICINDELIDÆ

In a small box of specimens recently very kindly sent to me by Mr. Leng, there is some instructive material. A male example of the bright green *Cicindela oslari* Leng, from San Miguel Mts., Col., taken at an elevation of 12000 feet, resembles the male type of *ostenta* Csy., very closely; it is narrower, with less distinct elytral foveæ and shorter antennæ, but in color and sculpture it is almost identical; the labrum, however, has three prominent teeth. On referring to the original description of *oslari*, I find that this bright green form is not the typical *oslari*, which is coppery-brown, and I have reason to believe that under that name two quite distinct forms were included and that another name—possibly varietal—should be given this green form, confounded hitherto with the true *oslari;* what its true relationship with *ostenta* may be cannot be determined exactly on such scanty material, but the two are evidently not identical.

In the *denverensis* subgroup of the *purpurea* group, Mr. Leng sent a female which proves to be truly the female of that species, having the identical form and coloration of the male type but larger and with wholly black labial palpi; it seems therefore that the pale penultimate joint mentioned under the description of *denverensis* is more essentially a male sexual character. With this example of *denverensis*, there were two related forms which are as follows:

Cicindela denverensis ssp. **conquisita** nov.—Bright green throughout

above and beneath, shining, the upper surface more sericeous and with a rich blue oblique reflection on the elytra; head with dense hair on the frontal tumidity, the labrum abruptly produced forward in the middle, the lobe tridentate; palpi black, with metallic green lustre; prothorax two-fifths wider than long, nearly as wide as the head, feebly obtrapezoidal, without trace of coppery lustre; elytra two-thirds longer than wide, three-fourths wider than the prothorax, with close granuliform sculpture, the humeri with a large rounded pale spot, briefly prolonged posteriorly, the anterior lunule otherwise not visible, the apical lunule very broad, subdetached anteriorly from a large rounded discal spot; just behind the middle there is a large, transverse, internally attenuated pale spot, broadly truncate externally very close to the margin. Length (♀) 13.0 mm.; width 5.2 mm. Nebraska (Sioux Co.).

Differs from *denverensis* in the large humeral pale spot—wholly absent in the latter,—in the broad apical lunule and more developed medial band and also in the beautiful rich sericeous blue color of the elytra by oblique reflection, of which there is no trace in *denverensis*.

Cicindela denverensis ssp. **oreada** nov.—Similar to *conquisita* in general form, color and rich blue sericeous oblique reflection on the elytra, but with the latter relatively more elongate and differently maculate; the humeral lunule is represented by a small spot at the humeri and another at basal fourth at some distance from the edge, the middle band by a short transverse dash from the median line to outer sixth, and the apical lunule by a transverse, outwardly attenuated apical dash and a discal spot at apical fifth or sixth and outer third. Length (♀) 12.7 mm.; width 5.3 mm. Nebraska (Benkelman).

While the above two forms may be regarded as subspecies of *denverensis*, I think the indications are that *pugetana* and *parallelonota*, described on pp. 20 and 21 of the present work, are specifically different, though evidently related rather closely. These five forms, together with *sierra* Leng, compose a series unmistakably different from the true *purpurea* series in general facies and coloration of the body.*

Through the kindness of Mr. E. D. Harris, I have, within the past few days, received an example of a wonderfully decorated member of the *purpurea* group, which may be described as follows:

Cicindela mirabilis n.sp.—Stout in form, rather feebly convex, dull in lustre, more shining beneath; head rugose, bright cupreous, the front with two anteriorly diverging discal blue dashes, the sides of the base and the

* The tibial differences referred to on page 21 (ante), in distinguishing between *denverensis* and *pugetana*, do not exist, the mistake arising from having inadvertently compared the posterior tibia of one with the intermediate tibia of the other.

genæ bright blue-green; frontal tumidity with moderate erect hairs; labrum much produced and sharply tridentate medially; antennæ moderate, the third and fourth joints bright coppery red, each banded with blue near the apex; prothorax short, obtrapezoidal, rugulose, nearly twice as wide as long, subequal in width to the head, the apex and base brilliant blue, the tranverse region between the sulci bright cupreous; elytra one-half longer than wide, three-fourths wider than the prothorax, inflated posteriorly and much wider at about posterior third than at base, dull sericeous-green, the lateral margin very broadly shining blue, this border angulate within at basal fourth and at the middle, abruptly narrowed and obsolete apically; finely reflexed lateral margin brilliant cupreous; surface finely, rather obscurely punctate, closely granulate, the granules shining and mingled with others that are smaller, without trace of subsutural impression; the only pale marking is a feebly oblique discal median band, from the broad blue margin to inner fourth, and an externally attenuated apical spot; under surface brilliant green, the sides of all the sterna bright cupreous; legs shining cupreous, the knees redder. Length (♀) 14.0 mm.: width 5.8 mm. California (Dutch Flat, Placer Co.).—G. R. Pilate.

This form may be placed near *lauta* Csy., and is rather closely related; it seems, however, to be specifically valid.

BOSTRYCHIDÆ

In the male of *Apatides* Csy., the apical part of the elytra is apt to be smoother and more punctureless than in the female, especially toward the suture; in the following species this feature is carried to an extreme:

Apatides pollens n. sp.—Stout, cylindrical, deep black and shining; head well developed, the neck longitudinally plicatulate, the vertex moderately convex, finely and sparsely punctate; eyes convex and prominent; antennæ of the usual structure in the genus, blackish, with rufous club; prothorax subquadrate, convex, a little wider than long, the parallel sides slightly arcuate; apical processes approximate, slender, abruptly turned upward at the apex, separated by between a fourth and fifth of the entire width; surface coarsely granose, with a few reflexed acute teeth at the sides anteriorly; near the base, toward the sides, the surface becomes smooth, polished and minutely, sparsely punctulate; elytra barely wider than the prothorax, more than three-fourths longer than wide, the sides straight, the apex rapidly rounded; surface strongly declivous at apex, with evenly elevated sutural margin, smooth and highly polished and almost completely impunctate in about apical third, coarsely but not very closely punctate in basal two-thirds, finely toward the sides, the suture elevated basally, the humeri rather prominent; legs weak, short and rather slender, deep black; abdomen finely and densely punctate throughout, the punctures bearing small erect hairs. Length (♂) 16.0 mm.; width 5.8 mm. Arizona (Bill Williams Fork),—F. H. Snow.

This is the largest Bostrychid known thus far within our geographic limits, excepting *Dinapate wrighti* Horn. It is not closely related to *fortis* Lec., from Cape San Lucas, or to *robustus* Csy., from Texas; *puncticeps* differs greatly from the other three in the close and rather strong punctures of the head. The above measurement does not include the thoracic processes, which are about 1 mm. in length.

BUPRESTIDÆ

A number of new forms in this family seem worthy of description as follows:

Chalcophora ingens n. sp.—Large and stout, unusually convex, strongly shining, blackish, the under surface and finely, closely punctate impressions of the upper surface cupreous; general facies and sculpture of the elytra as in *virginiensis*, the head larger, with very deep sulcus, the antennæ notably longer, extending to basal third or fourth of the prothorax, the latter similar in general form but having the sharply marked obtuse lateral angles but little before the middle; elytra more convex, much more sloping posteriorly from near the middle of the length, the serratures of the sides posteriorly very feeble; under surface nearly similar, the two fine grooves of the prosternum more rapidly converging posteriorly. Length (♀) 31.5 mm.; width 11.0 mm.

A single example, unfortunately without indication of locality.

Chalcophora virginiensis ssp. **antennalis** nov.—Similar to *virginiensis* in general form, coloration and sculpture, but with a notably larger head and longer, more slender antennæ, which extend almost to the base of the prothorax, the latter similar in general form and with the sides obtusely and arcuately subprominent near apical third, but with the intricate sculpture toward the sides more broken; elytra similar but with the sides more rounded inward at base and the embossed smooth surfaces less elevated; sides distinctly serrulate apically; under surface nearly similar, except that the metasternum is more broadly concave. Length (♀) 29.0 mm.; width 10.0 mm. Idaho.

This form is distinguishable at once from *virginiensis* by its larger size, rather broader form, larger head and longer antennæ; it is probably more nearly specific in value than subspecific.

Chalcophora cupreola n. sp.—Form and habitus nearly as in *laurentica* and *fortis*, but brighter æneo-cupreous in color, with still finer longitudinal elevations of the elytra and a much smaller head; elytra near the humeri and along the epipleura metallic greenish; under surface bright cupreous throughout; head barely half as wide as the prothorax; vertex nearly as in *laurentica*, the median groove less deep, the sparse pubescence rather longer; eyes much less convex, separated by barely more than twice their width, viewed vertically; antennæ short, black, the two basal

joints subæneous, about as long as the thoracic length; prothorax nearly as in *laurentica* and *fortis*, the scutellum similarly minute but elongate-oval, polished, black and very convex; elytra as in *laurentica* but more strongly rugose and rather more elongate, the serrulation almost obsolete. Length 25.0 mm.; width 8.8 mm. Kansas.

Besides the smaller head and less convex eyes, this species differs from both *fortis* and *laurentica* in the much narrower rugose sulcus of the prosternum.

Chalcophorella obsolescens n. sp.—Slightly broader, more convex and more posteriorly inflated than *campestris*, dull metallic green above, greenish-cupreous beneath, rather shining; head barely more than half as wide as the prothorax, deeply sulcate, coarsely, closely punctate, each puncture with a short silvery hair; antennæ rather short, stouter than in *campestris*, the joints much more rapidly constricted at their bases; prothorax trapezoidal, with moderately and very evenly arcuate sides, three-fifths wider than long, very coarsely, confluently punctate laterally, but less irregular than in *campestris* and not impressed near the hind angles, the punctures sparser and more regular medially, the sulcus very narrow, obsolete at apical third along a median line which becomes embossed, flat and impunctate thence to the apex, ending at base in a deep rounded puncture; scutellum subobsolete; elytra distinctly wider at three-fifths than at base, the sides thence straight to the base and arcuately oblique to the apex, which is smooth and obtuse, with the sutural spines small; lateral serrulation very much feebler than in *campestris* and still more markedly so than in *serriger;* surface as in *campestris* but with every feature much reduced, very much smoother; abdomen similarly sculptured but not so sharply pointed at apex in the female; prosternal groove broader and more coarsely sculptured. Length (♀) 23.5 mm.: width 7.8 mm. Louisiana.

At first I thought that this might be *langeri* Chev., as the pronotal sulcus is obsolete anteriorly, but the sulcus in *langeri* is said to be much broader even than in *campestris;* here it does not have a third the width of the broad entire groove of that species; *langeri* is placed as a synonym of *campestris* by Kerremans.

Cinyra L.–G.

The species belonging to the subgenus *Spectralia* Csy., a group of the genus *Cinyra* L.–G., may be known by the following characters:

Antennæ black throughout 2
Antennæ black, becoming testaceous in about outer half, excepting the last joint, which is blackish. 4
2—Lateral impressed densely punctate line of the prothorax only present in basal half, the lateral parts thence to the apex evenly convex and sparsely punctate; body elongate-suboval, gradually pointed behind,

black, with greenish lustre, the impressed densely punctate areas of the elytra coppery, the under surface and legs cupreous; head nearly as wide as the thoracic apex, the eyes convex, widely separated, the front evenly and feebly convex, densely punctate, with a central and two sublateral irregular embossed smooth spots; prothorax one-half wider than long, the base wider than the apex, the sides nearly straight; surface very broadly impressed and closely punctate along the middle, the impression with a short narrow subimpunctate area at the bottom; elytra evidently wider than the prothorax, the sides rapidly converging and barely arcuate in more than apical two-fifths, the apices narrowly sinuate and bidenticulate, the close-set striæ rather irregular but well defined, not wholly interrupted by the numerous depressed and densely punctate areas, the intervals rather strongly and closely, subserially punctate; prosternum rather broad, flat, closely punctate; abdomen finely, sparsely punctate medially. Length 12.7 mm.; width 4.0 mm. North Carolina (Southern Pines),—Manee . . . . . **abbreviata** n. sp.

Lateral impressed grooves of the pronotum entire, extending, densely punctate, from base to apex, though gradually becoming shallower . 3

3—Eyes strongly convex and prominent, the very densely punctato-rugose front between them with a very irregular central broad chevron of three large embossed smooth areas; general characters somewhat as in the preceding, except that the median impressed and densely punctured line of the pronotum is narrow and even throughout, the depressed and densely punctate, brightly cupreous areas of the elytra much more numerous and more elongate, giving a more irregularly undulated surface and that the striæ are very much feebler, the subserial punctures of the intervals smaller; the sides of the elytra posteriorly are not subrectilinearly converging as in the preceding, but arcuately converge through a rather shorter extent, the apices more narrowly, feebly sinuate and minutely bidenticulate; along the sides of the elytra the densely punctate elongate depressed cupreous areas form almost a continuous depression; sterna similar, the median parts of the abdomen rather less sparsely, finely punctate. Length 11.4 mm.; width 3.75 mm. Illinois . . . . . **ocularis** n. sp.

Eyes feebly convex and not prominent, the frontal surface densely and subrugosely but rather less coarsely punctured and simply with a small, narrow and inconspicuous median embossed smooth area along the median line; prothorax nearly as in *ocularis;* elytra narrower, more gradually less arcuately narrowed behind through a longer distance—more than apical two-fifths,—the apices nearly similar but the depressed areas are less definite, more confused, less cupreous and more coarsely and less densely punctate, the striæ close-set and rather deep suturally, scarcely traceable laterally; abdomen sparsely but more strongly punctate medially, densely as usual laterally. Length 10.5 mm.; width 3.2 mm. Texas.

macilenta Csy.

4—Body more slender than in any of the preceding, the head with feebly convex eyes as in *macilenta* but with the front more brightly cupreous and with the dense punctures finer, having centrally a feebly and very

unevenly embossed narrow smooth chevron; prothorax nearly as in the two preceding but with the densely punctate median channel broader and shallower; elytra in outline nearly as in *ocularis* but narrower, the depressed areas smaller, more widely separated and with their fine punctures much less dense; there are two or three before the middle, others in a slightly post-median transverse series and two or three more elongate and more posterior; the striæ are fine and rather sharply incised, the subserial punctures of the intervals distinct; abdomen densely punctate, sparsely medially toward base only. Length 8.6 mm.; width 2.7 mm. Pennsylvania.

gracilipes Mels.

Species of this group seem to be rather numerous, though not abundant individually, in the nearctic regions, and it is highly probable that *Spectralia* will have to be advanced to generic rank.

CERAMBYCIDÆ

A number of interesting Cerambycids have been received of late and it seems fitting to describe them at the present opportunity.

Aneflomorpha imbellis n. sp.—Slender and rather shining, pale rufotestaceous, the head and prothorax of slightly darker tint; pubescence pale, rather long but not dense, inclined; head rather wider than the prothorax, with convex and coarsely faceted eyes; antennæ long and slender, extending a little beyond the elytra, completely devoid of spines; prothorax but little longer than wide, the sides subprominent visibly behind the middle; surface very coarsely, closely punctate, with a long smooth irregular median line which is much abbreviated anteriorly and not quite attaining the base; elytra two-fifths wider than the prothorax and about four times as long, the sides subparallel, expanding slightly toward base, rapidly rounding at apex, without trace of truncature, to the sutural angles, which are produced, dentiform and prominent but not spiniform; surface with coarse, close-set punctures, becoming gradually fine apically; under surface finely, not densely punctate throughout and with rather finer hairs; femora mutic, the legs slender. Length (♂) 13.5 mm.; width 2.7 mm. California (San Diego),—Ricksecker.

Readily distinguishable from any other known species by the completely unarmed antennæ, and, from all except *unispinosa*, in the form of the elytral apices. I also have specimens agreeing very well with the description of *linearis* Lec., taken by Mr. Ricksecker at San Diego; the type locality is Tejon.

The form described by the writer under the name *Hypermallus externus* (Mem. Col. III, p. 300) is not even of varietal value; it may be united with *incertus* as a synonym; the following is, however, a distinct species allied to *incertus:*

Hypermallus compactus n. sp.—Shorter and relatively stouter than *incertus*, robust, very dark castaneous in color, the vestiture short, coarse, yellowish, condensed in irregular areas on the elytra and near the thoracic elevations; legs and antennæ dusky rufous; head (♂) rather finely, not densely punctate; antennæ long, a fourth longer than the body, slightly thickened basally, loosely pubescent, with longer stiff hairs beneath, the spines very short and thick; prothorax slightly shorter than wide, the apex not quite as wide as the base, the sides feebly, unevenly rounded; surface with a central entire and strongly tumid smooth line and, on each side, two tumid smooth spots, the depressions with a loose mixture of distinct larger and small punctures; elytra a third wider than the prothorax, not quite two and one-half times as long as wide, the equal apical spines widely spaced; punctures widely spaced and only moderately coarse, fine apically; femora mutic. Length (♂) 15.0 mm.; width 4.5 mm. Texas.

Allied to *incertus* but shorter and relatively stouter, with much longer antennæ and stronger and closer thoracic punctures.

Hypermallus militaris n. sp.—Form (♂) rather stout, the size small, dark brown in color, the legs and antennæ testaceous; head coarsely, densely punctato-rugose; antennæ slender, not a third longer than the body, the joints feebly, longitudinally impressed, the third distinctly longer than the fourth but equal to the fifth; prothorax about as long as wide, the base and apex truncate, the former the narrower, the sides evenly arcuate, more converging basally; surface strongly, deeply, very densely punctate, with a wide coarsely punctate, shining median line from base to apical third, the scanty vestiture yellow and forming three narrow loose irregular lines; elytra evidently wider than the prothorax and nearly four times as long, feebly cuneiform, the apices obliquely and narrowly, deeply sinuate, the punctures only moderately coarse, fine apically, everywhere well separated, the pubescence yellowish, scanty, the condensed spots few, small, loose and irregular; last ventral wider than long, trapezoidal, with arcuate apex and rounded angles. Length (♂) 11.5 mm.; width 2.5 mm. New York (West Point),—Wirt Robinson.

Much smaller than *villosus*, with more slender antennæ, still more abbreviated outline and more shining and strongly sculptured male pronotum.

Hypermallus breviusculus n. sp.—Form (♂) still more abbreviated, very small in size, dark brown, the legs and antennæ slightly paler and more reddish brown; head strongly, densely punctato-rugose; antennæ slender, the joints feebly flattened and densely sculptured and with the usual sharp edge internally, the spines small; joints coarsely, closely punctato-rugose, the third longer than the fourth and equal to the fifth; prothorax shorter than wide, the truncate apex and base equal, widest at the middle, the parallel sides evenly rounded; surface rather coarsely, deeply, densely punctate and somewhat shining, the central smooth spot elongate and with a few coarse punctures, the yellow vestiture

broadly and loosely aggregated sublaterally, also very narrowly along the middle toward apex and base; elytra much wider than the prothorax and almost five times as long but much less than four times as long as wide, subparallel, the apices narrowly sinuate and bidentate; surface rather closely punctate, finely apically, rather coarsely basally, the coarse yellowish vestiture slightly more close-set in irregular and ill-defined areas; last ventral shorter and more rounded than in the preceding; legs slender. Length (♂) 10.0 mm.; width 2.2 mm. Massachusetts (Bedford),—Frost.

This species is not very closely allied to any other, being of very small size and much more abbreviated outline; it may be placed at the end of the genus. The head and prothorax are relatively smaller than usual.

Anoplium laterale n. sp.—Form, coloration and lustre very much as in *mœstum* but with larger and relatively much broader prothorax, red-brown throughout, the legs and antennæ slightly paler, the pubescence short, sparse and even throughout. Male with the head larger than in *mœstum*, similarly closely and strongly punctate, the antennæ a third longer than the body, rather thick and strongly sculptured basally, the joints cylindric, not flattened and rugose internally as in *Hypermallus*, the spines very short; third joint longer than the fourth but not quite as long as the fifth; prothorax differing greatly, slightly shorter than wide, the sides broadly angulate just behind the middle, thence straight and feebly converging nearly to the apex and more converging and subsinuate to the base; surface rather coarsely, closely punctate, the median line narrowly smooth and irregularly punctured except apically; elytra slightly wider than the prothorax, less than three times as long as wide, the sides rounding in apical third, the apices obliquely truncate, with obtuse and blunt angles; punctures very coarse and rather close-set, small apically. Female with the antennæ almost as long as the body, more filiform, the prothorax subevenly rounded at the sides and still more coarsely punctate. Length (♂ ♀) 12.0–14.0 mm.; width 3.5–4.0 mm. Texas. Three examples.

To be recognized readily by the stout form, with much broader anterior parts than in *mœstum* and by other characters given above; the thoracic punctures in the male of that species are very much finer and denser than in the male of *laterale* and the sides are subevenly rounded in both sexes.

Anoplium pinorum n. sp.—Smaller and narrower than *mœstum* and darker brown in color, the legs and antennæ dark rufous; vestiture of rather coarse hairs notably sparse, even; head coarsely and closely but not confluently punctate; antennæ (♂) slender, but feebly thickened basally and with sparse strong punctures, fully a third longer than the body, with rather long bristling hairs and very short spines, the joints proportioned nearly as in the preceding; prothorax slightly shorter than

wide, the truncate base narrower than the feebly arcuate apex, the sides subparallel and nearly straight from slightly behind the middle for some distance, then rounding rapidly to the apex, slightly converging basally, the angulation very obtuse and blunt; surface with a very close-set mixture of rather fine and of less numerous larger, punctures, with an inconspicuous elongate median spot having stronger sparse punctures; elytra only a fourth or fifth wider than the prothorax, not quite three times as long as wide, very feebly cuneiform, gradually arcuately narrowing posteriorly to the narrowly and feebly sinuate apices, the external angle sharply marked but not dentiform; punctures very coarse, small apically, separated basally by about their own diameters; under surface finely, sparsely punctulate, the prosternum densely; legs rather short. Length (♂) 10.8 mm.; width 3.0 mm. North Carolina (Southern Pines), —Manee.

This species is very distinct from *mæstum*, as shown by the above description, but belongs in that vicinity; the elytral punctures basally are even very much coarser than they are in *mæstum*.

Hapalosalia densicollis n. sp.—Form and coloration very much as in *vibex*, black, the elytra each with a pale yellowish vitta from the humerus very nearly to the apex, swollen slightly near the latter and about equal in width throughout to the black sutural vitta; head and prothorax with very short and rather abundant brownish hairs, the elytra with longer erect paler hairs, the entire under surface extremely densely and finely punctulate and with a dense covering of short decumbent silvery pubescence; head finely, very densely punctate throughout, the sides rapidly converging and arcuate behind the large and prominent eyes; antennæ very slender, filiform, piceous-black, the third joint a little shorter than the fifth and much longer than the fourth; prothorax slightly elongate, globularly swollen medially, strongly constricted at apex and base, the fine median line feebly impressed, the entire surface finely, very densely punctulate; elytra two and one-half times as long as wide, cuneiform, the apex conjointly rounded, at base two-thirds wider than the prothorax, relatively coarsely, deeply and closely punctate, the punctures gradually smaller to the apex but even there very distinct; legs slender, the pale femora and tibiæ all more or less blackish distally; tarsi piceous, the posterior paler. Length (♂) 7.3 mm.; width 2.2 mm. North Carolina (Black Mountains),—Beutenmüller.

This species differs from every other thus far known in the very dense punctuation of the head and prothorax throughout their extent; otherwise it is somewhat remindful of *vibex* Newm.

In a series of *sphæricollis* Say, sent me by Mr. Beutenmüller, also taken on the Black Mountains, there are four examples with red prothorax, apparently independent of sex, and three with black prothorax. The forms with red, do not differ otherwise from those with black, prothorax, and they are both different from my Canadian

exponent of *ruficollis* Say, in their uniformly more slender outline, more elongate, less medially inflated prothorax and relatively less narrowed apex; *ruficollis* is therefore a valid taxonomic unit, which probably also has both red and black prothorax.

Mr. Beutenmüller also obtained additional specimens of *Psenocerus tristis* Csy., on the Black Mountains of North Carolina, which are in every way identical with the original type, showing that the nature of the latter is in no way aberrational. There is a blackish variety of the usually red-brown *supernotatus*, which may have been confounded with *tristis*, but it does not resemble it in any way, This black variety of *supernotatus* resembles the latter in general form, size and markings, but the antennæ are a little longer and thicker and the first joint is more developed; the basal prominence of the elytra is equally pronounced; this variety may be called *Psenocerus supernotatus* var. **funebris** n. var.; it occurs abundantly at Harrisburg, Pa. *Supernotatus* in a practically unvarying form occurs from Long Island to Iowa.

Strangalia maneei n. sp.—Body rather stout, suboblong, feebly convex, shining, black, the elytra each with a small elongate-oval red spot at the middle externally; pro- and mesosterna and their side-pieces and also the anterior and middle legs throughout, deep black; entire remainder of the under surface bright red; posterior femora red, the tip, the entire tibiæ and tarsi deep black; head small, with rather close-set punctures, the eyes large, virtually attaining the base; antennæ nearly as long as the body, slender, deep black, the fifth joint almost as long as the two preceding combined and, as well as the succeeding joints, more densely pubescent; prothorax campanulate, a little wider than long, the basal angles very prominent laterally, nearly one-half wider than the head, very convex, broadly impressed across the base but otherwise even, finely, sparsely punctate and with extremely short erect black hairs; elytra oblong, very feebly tapering, flattened above, dehiscent at apex, the suture broadly rounding outwardly to the very faintly denticulate outer angle; punctures coarse and deeply perforate, separated by two to three times their diameters basally, finer, feebler, asperulate and close apically, each with a very minute erect dark hair; abdomen finely and sparsely, the metasternum and side-pieces less finely and very densely, punctate throughout, the pubescence minute and very fine, pallid; legs long; basal joint of the hind tarsi longer than the remainder, the third small, very deeply and angularly notched. Length 8.6 mm.; width 2.7 mm. North Carolina (Southern Pines),—A. H. Manee.

This species is allied to *cruentata* Hald., but differs in its smaller size, in having merely a small lateral rufous spot on the elytra and in the coloration of the under surface, the entire hind body being

red in *cruentata;* it also differs in its very much coarser elytral punctures.

Goes tessellatus Hald., differs from the other species in its larger size, stouter form, in the longer basal joint of the antennæ, in the form and vestiture of the scutellum and in having two very faint fine raised lines on each elytron; it occurs exclusively in the southern Atlantic States and a specimen recently received from Mr. Manee, taken at Southern Pines, North Carolina, agrees very well with the type of *Hammoderus amplipennis* Csy., from the Levette collection, the Colorado label on the latter being erroneous in all probability; the type of *amplipennis* is shorter and relatively somewhat broader than the Carolina specimen and has a shorter and more transverse prothorax, but they are evidently very closely related. While *tessellatus* belongs to a special group of *Goes*, I am not prepared to conclude finally that it belongs truly to *Hammoderus*, although agreeing almost exactly with typical forms of that genus as depicted in the Biologia.

The following species is a very distinct member of the typical *Goes*, as represented by *pulverulentus* Hald., having a much shorter basal antennal joint than in *tessellatus* and being devoid of any trace of elevated elytral lines but differing especially in the form of the scutellum, this being smaller, shorter and with strongly parted longer and coarser vestiture, agreeing with *pulverulentus* and allies in this respect. In *tessellatus* the scutellum is larger and flatter, with much finer and shorter, dense and even vestiture, which is not definitely parted along the middle. In the Carolina specimen alluded to, which I hold to be typical *tessellatus*, the scutellum is rather longer than wide, but in the type of *amplipennis* it is broader and more parabolic in outline.

Goes robinsoni n. sp.—Form stout, parallel, piceous-black, densely clothed with short coarse ochreous hairs, condensed in spots about half as large as the scutellum, which are scattered sparsely and without order over the elytra, the latter without trace of fasciæ, nubilous or otherwise; head slightly narrower than the prothorax, with a fine entire median incised line; antennæ slender, a fourth longer than the body, the basal joint twice as thick as the succeeding joints, feebly obconic, two and one-half times as long as wide, very finely punctulate and with close small decumbent hairs, with a few longer erect black bristles above and beneath, two-thirds as long as the third joint; prothorax not quite one-half wider than long, of the usual form, the spine acute, the surface rather coarsely and densely punctato-rugose and with short close-set hairs; scutellum

wider than long, broadly rounded, densely clothed with coarse reclined but not decumbent, yellow-brown hair, narrowly parted along the middle by a glabrous line; elytra one-half wider than the prothorax, two and one-half times as long as wide, rounded at apex, the sutural angles rounded; surface without trace of fine elevated lines, coarsely, deeply, subgranularly punctate, the punctures well separated, gradually smaller apically; under surface and legs densely clothed throughout with similar short brownish-ochreous hairs; last ventral broadly, feebly sinuate at apex in the type. Length (♂) 23.5 mm.; width 7.2 mm. Rhode Island (Watch Hill).

This species is allied to *pulverulentus* and *laurenticus*, but is much stouter and has not even the faint semblance of nubilous fasciæ there traceable; it also has the condensed ochreous spots of the elytra larger and more conspicuous and the punctures much coarser. It is named in honor of Col. Wirt Robinson, Professor of Chemistry and Geology at the Military Academy, who very kindly placed his unique specimen in my collection.

Within a few days I have been able to study two female specimens of *Oberea flavipes* Hald., taken by Mr. Hood on Plummer's Island, Md.; they show at once that *flavipes* is a valid and isolated species. The body is intense black almost throughout above and beneath, but has a grayish bloom due to the close-set whitish hairs; the elytra are irregularly flavescent near the scutellum and the epipleura near the base and the legs throughout are bright brownish-flavate; the head and prothorax above and beneath are deep black. The two callous spots on the pronotum are visible by reason of their convexity and lack of punctuation. It belongs to the *bimaculata* series.

Haldeman's entire description of *myops* Hald., is this: "yellow; antennæ, eyes, a spot upon each side of the pronotum, lateral elytral vittæ, and tarsi, black"; the description was made from a drawing in the cabinet of Major LeConte, and a penciled note by J. L. LeConte indicates that it was taken at Tolula, in June. Tolula is apparently in northern Georgia.

The original description of *Oberea tibialis* Hald., (*Phytœcia*) is: "Black; anterior tibiæ and half the femora rufous; 4¼‴ long; (elytra 3,) 1 wide. Pennsylvania. Cab. Melsheimer. Slender, eyes black, orbits with cinereous hairs: thorax somewhat hairy: elytra gradually tapering, flattened above, obliquely truncate at tip on the inside: medial femora slightly rufous at tip, on the posterior side: beneath slightly cinereous."

The following is a distinct species of the *bimaculata* series, recently taken by Mr. Beutenmüller:

Oberea umbra n. sp.—Body parallel, feebly convex, extremely slender, deep black, the entire under surface and legs deep black, the anterior part of the prosternum transversely yellow, which tint pervades the lateral part of the pronotum at apex, the remainder of the pronotum and the entire elytra black; tarsi feebly picescent distally; pubescence above everywhere minute and blackish in color, beneath longer, denser and dark gray; head wholly black, closely, strongly and unevenly punctate; antennæ four-fifths as long as the body, filiform, slender and deep black; prothorax a little longer than wide, cylindric, closely, unevenly and rather coarsely punctate, the callous spots small, embossed and polished; elytra more than five times as long as wide, subparallel, slightly inflated basally, at base two-fifths wider than the prothorax, slightly shining, the punctures very moderate in size, in even close-set rows, becoming confused but not at all smaller in about apical fourth; legs short, sparsely, very finely pubescent. Length 9.0 mm.; width 1.4 mm. North Carolina (Black mountains).

The type is of undetermined sex and the species is not closely allied to any other known to me.

The following is a rather distinct species of *Tetraopes*, which may as well be made known at the present opportunity:

Tetraopes sandix n. sp.—Form stout, the size rather large, dark rufous above, the entire under surface, excepting the prosternum, black and extremely densely clothed with very small decumbent slate-blue hairs; legs black, all the femora dull rufous, with black apex, the anterior tibiæ sometimes partially rufous; head rather finely, sparsely punctate; antennæ stout, black, the basal joint red, black at apex, the second, third and most of the fourth joints very densely and uniformly clothed with minute bluish-gray hairs, the first three also with short sparse erect black setæ; outer joints clothed with minute and dense, very dark brown hairs, the base and apex of the joints with gray annuli, the last only at base as usual; inferior fringe long and distinct; prothorax somewhat sparsely, not coarsely punctured, rather transverse, the lateral prominence strong, the umbo strong and abrupt, feebly arcuate at the sides, the four black spots forming a distinctly transverse parallelogram; bristling setæ at the sides short; scutellum velvety-black; elytra almost twice as long as wide, feebly tapering, rounded at apex, the sutural angles well rounded; humeri rather prominent; surface finely, sparsely punctate and covered densely with very minute decumbent gray hairs, giving a strong bloom, the sparse erect hairs short and pallid; each elytron has a humeral, anterior juxta-sutural and larger transversely oval post-medial black spot, the post-humeral wholly wanting in specimens at hand. Length 14.6–16.7 mm.; width 5.0–6.0 mm. California (Witch Creek, San Diego Co.).

Two specimens, which display no sexual differences, were very

kindly given me by Mr. J. D. Hood, of Washington. The species may be placed near *coccineus* Csy., but is much larger and stouter and differs in the very dense vestiture of the subbasal, and more annulate outer, antennal joints, and in many other features of form and structure.

Tessaropa Hald.

Dysphaga Lec.

The following species does not accord at all well with published descriptions of *tenuipes* and it is therefore in all probability as yet unrecorded in the literature of the Cerambycidæ. Aurivillius places the genus in a very different part of the series from that determined by LeConte and Horn, in fact near *Achryson* and *Oeme* in the Cerambycinæ, where it seems more appropriately placed also by reason of habitus, than anywhere in the Lamiinæ:

Tessaropa apicalis n. sp.—Slender, deep black throughout the body above and beneath, the elytra pale flavo-testaceous, the tips piceous-black; head a little wider than the prothorax, densely punctato-scabrous, with very fine median stria, deeply impressed between the antennæ; eyes large, very broadly divided, separated above by half their apparent width; hairs very short, sparse and erect; antennæ extremely slender and filiform, a third longer than the body, so pale as to be almost translucent, denser basally, clothed with very short erect hairs; basal joint stout, twice as long as wide, black and densely rugose, the second joint very short though distinct, three times as wide as long; prothorax cylindric, just visibly longer than wide, truncate at apex and base, coarsely, densely and confusedly punctate, with a slightly elevated transverse flat basal area, which is minutely and transversely strigilate and having a small medial puncture; elytra twice as long as the prothorax and, at base, one-half wider, slightly cuneiform, each circularly rounded at tip, the pale part shining, rugulose, bicostulate and finely, sparsely punctate, the apical black part finely and densely rugose and more opaque; hind wings not quite extending to the abdominal tip; legs pale, slender, the tarsi very short, picescent, the posterior less than a third as long as the tibiæ. Length 7.8 mm.; width 1.35 mm. Pennsylvania (Harrisburg),—A. B. Champlain. No record of food plant is given.

In *tenuipes* Hald., the head is said to be deeply impressed and the elytra fuscous, obsoletely fulvous at base; less than apical third of the elytra is dark in *apicalis* and this part is very differently sculptured from the very pallid remainder of the surface. A second Harrisburg specimen at hand, received with the preceding, said to have been reared from the beech, is much smaller, with entirely

black elytra, red abdomen, piceous-black legs, with pallid femora and with the antennæ shorter, deep black throughout and clothed more densely with much longer erect black hairs; the apex of the abdomen has a very large triangular emargination, occupying the entire tip; in the type of *apicalis* the abdominal tip has a smaller emargination, the bottom of which is not very acute and a supplementary segment is exposed through the emargination. I am not prepared to say that these two specimens are sexes of one species by any means, and do not know whether the second may be *ventralis* Hald., or not. *Ventralis* is said by LeConte to be the male of *tenuipes*. It is not very probable that the second specimen mentioned above, can be the male of *apicalis*, for the antennæ are shorter and the eyes much more widely separated on the front. The two specimens were not taken at the same time of the year, the type of *apicalis* being dated May 4, 1912, while the smaller one was reared and appeared Dec. 30, 1911.

LUCANIDÆ.

Of *Ceruchus* MacL., there are three species now on our lists, the well known and abundant *piceus* Web., of the Atlantic regions and *striatus* and *punctatus* of LeConte, of the Pacific coast fauna. The following species is allied to *piceus* but has elytra more nearly as in *striatus:*

Ceruchus virginiensis n. sp.—Male, when fully developed, as broad as in the similar stage of *piceus* but more elongate, rufo-piceous throughout, the elytra deep black; integuments shining, glabrous; head about as wide as the prothorax, almost as in *piceus* throughout, except that the mandibles are much less arcuate, the opaque mentum similarly turned upward in plane anteriorly but with the median prominence at base narrower and more abruptly defined; antennæ missing in the type; prothorax as in *piceus* throughout; elytra evidently wider than the prothorax, nearly one-half longer than wide, one-half longer than the head and prothorax combined, omitting the mandibles, parallel, circularly rounded at apex, the striæ rather deeply impressed throughout and with moderate, close-set punctures, the convex intervals coarsely, deeply, unevenly and rather closely punctate; intervals 6–8 confused and obliterated basally to the humeri, forming an even and convex, evenly punctured surface; humeral angles sharply marked but not prominent; under surface nearly as in *piceus* but with the last abdominal segment relatively longer and more arcuate at apex. Length, exclusive of mandibles, 14.4 mm.; width 5.5 mm.; length of mandibles 3.5 mm. West Virginia (White Sulphur Springs).

The single type is rather dilapidated but can be seen to differ specifically from *piceus* in its larger, more elongate and deeply and coarsely sculptured elytra and much less arcuate mandibles; unfortunately the legs are missing in the type, which was very kindly given me by Prof. Wirt Robinson, of West Point.

So far as known to me, the following species does not closely resemble any of those hitherto described in *Platycerus* Geoff., having a relatively much broader prothorax:

Platycerus laticollis n. sp.—Hind body rather narrow, the color pale and uniform red-brown throughout the body and legs, the head darker basally, moderately shining, glabrous; head small, distinctly less than half as wide as the prothorax, the sides before the eyes obtusely subangulate and much more prominent than the latter, thence evenly oblique to the obtusely angulate and anteriorly prominent limits of the epistoma, the latter broadly, rather deeply sinuate; mandibles very small, stout, acute at tip and not dentate within; antennæ with the stem slender, subglabrous, the club stout, parallel, 3-jointed, densely clothed with minute gray pubescence and barely as long as the basal joint of the stem; prothorax four-fifths wider than long, the sides prominently rounded distinctly behind the middle, thence broadly arcuate to the obtusely rounded moderately advanced apical angles and more rapidly converging and straighter to the basal angles, which are right and not rounded, the sides just before them feebly sinuate for a very short distance; base transverse, a third wider than the sinuate apex; surface broadly deplanate at the sides, less broadly and more concavely basally; punctures rather strong, well separated, close apically and on the lateral convex slopes, coarser on the deplanate sides; elytra more than one-half longer than wide, much narrower than the prothorax, parallel, evenly rounded at apex, the punctures moderate, close-set in unimpressed series, which are alternately more widely and narrowly separated toward the suture, with the broader intervals flat, the narrower slightly convex, the former closely and confusedly punctate, the latter more finely and uniseriately; toward the sides the surface is smoother and the punctuation more even; humeral angles obtuse, not prominent; anterior face of the anterior tibiæ not at all punctate except at apex and having, behind the middle, a rounded and densely, decumbently golden-pubescent area; legs rather slender, the tarsi filiform, the posterior four-fifths as long as the tibiæ. Length 9.3 mm.; width of elytral base 3.0 mm.; width of prothorax 3.65 mm. Oregon (Mary's Peak).

The single example, which is probably male, belongs to the *agassizi* series, but differs in its much sparser sculpture, wide and laterally deplanate prothorax, basally much stouter mandibles and in its pale coloration and small size.

I have recently received an example of *californicus* Csy., taken by Mr. Nunenmacher in Josephine Co., Oregon; it agrees very well

with the type but is nearly deep black in color, with slightly diaphanous thoracic sides, showing that the type is probably immature.

After carefully reading the description of *pedicellaris* Möllenkamp (Intern. Ent. Zeit., V, 1911, p. 302), described as from California, I am unable to find any notable differences between it and *thoracicus* Csy.; it is highly probable, therefore, that it is a synonym of that species.

PASSALIDÆ

Proculus Kaup.

In describing *Proculus magister* (Ann. N. Y. Acad., IX, 1897, p. 641), I compared it with a species at that time supposed to be *mneszechi* Kaup, but which, because of the high basal process of the mandibles, proves to be different and much closer to *burmeisteri* Kuw. This species may be described as follows:

* **Proculus mandibularis** n. sp.—Form shorter than in *magister*, similarly convex and very shining throughout; mandibles with a very high slender and almost perpendicular dorsal process almost at the extreme base; small frontal tubercles mutually less separated than either from the ends of the strong oblique obtuse lateral ridges, the lateral anteriorly margined depressions distinct; central tubercle minute, isolated; anteocular lateral spur strong, subacute; labrum feebly and broadly sinuate at tip; prothorax as in *magister*, impunctate, the lateral irregular depression well developed; elytra oval, equal in width to the prothorax, with moderate and rather feebly impressed but distinctly and closely punctate striæ throughout, the intervals everywhere almost flat; flanks glabrous except anteriorly; middle tibiæ with two or three small medial spines externally, the posterior with one to three. Length 66.0 mm.; width 26.0; width of head 20.0 mm.; length of prothorax 19.0, of elytra 36.0 mm. Honduras (San Pedro Sula).

The only form with which this can be compared is *burmeisteri* Kuw., and there the strial intervals of the elytra are particularly dwelt upon as being notably convex. In *magister* the mandibular dorsal process is more gradually formed, less elevated and ends at basal two-fifths; it is more prominent, however, than in *mneszechi*, in which species the anterior thoracic angles are better defined, the elytral intervals flatter and the ends of the anterior tibiæ more finely and obliquely incised than in *magister*.

* **Proculus densipennis** n. sp.—Form narrower, convex, shining, the elytra very densely opaque, with feebly impressed, very obscurely punctate striæ and nearly flat intervals; head large, with acutely porrect

ante-ocular process; mandibles evenly bowed externally, the dorsal process high, slender, basal and obliquely pointed; labrum transverse and feebly bisinuate at apex; frontal margin transverse, with two small sinuses at each side, the frontal tubercles distinct, the central small but strong, at the junction of three feeble ridges; prothorax impunctate, with well marked apical angles and lateral depression; elytra oval, apparently rather narrower than the prothorax, the striæ more evident suturad, the flanks more shining, pubescent throughout, the lateral striæ more impressed and distinctly punctate; middle tibiæ usually with two, the posterior with one, external spinule. Length 51.0 mm.; width of head 15.0, prothorax 18.5 and elytra 18.8 mm.; length of prothorax 14.0, of the elytra 27.0 mm. Guatemala (Chiquimutilla).

Until the excellent figure of *opacipennis* given by Kaup was examined, I had considered this species to be identical, but it differs in the narrower and more elongate elytra, sharper ante-ocular processes and less spinose external tibial margins, as well as in many other features. From *beckeri* Zang, it differs in its much smaller size, narrower form and in the pubescence of the elytra.

The distinction made by Kuwert between *Paxillus leachi* and *minor*, relating to the presence or absence of a humeral tuft of conspicuous stiff hairs, is a good one; this tuft does not exist in *parvus* Csy., which is therefore a valid species and not a synonym of *leachi* as stated by Arrow.

SCARABÆIDÆ

A number of interesting species of *Trichius* Fabr., have been accumulating in our collections for some years, principally inhabiting the southern Atlantic regions; it would seem well to make these known briefly as follows:

Trichius rufobrunneus n. sp.—Moderately stout and of pale and rich red-brown color, with the legs more obscure, the head piceous-black; pubescence very short; clypeus transverse, feebly sinuate medially at apex; prothorax nearly as long as wide, rounded at base, the sides broadly angulate before the middle, the punctures small, close-set; elytra two-fifths wider than the prothorax, shorter than wide, inflated near basal third; intervals two and four depressed and finely, densely punctate, the convex intervals sparsely; flanks shining and sparsely punctate in basal third, opaque and darker brown in apical two-thirds, the two short transverse white lines distinct; pygidium with very short fine sparse pubescence, with white incrustation rather narrowly at the sides; legs slender. Length (♂♀) 9.8–12.0 mm.; width 5.0–6.0 mm. Florida (Marion Co.). Twelve examples.

Distinguishable readily from *piger* by the coloration and the nearly bald pygidium.

Trichius obesulus n. sp.—Stout and of moderately large size, shining, black, the anterior parts generally feebly greenish, the elytra obscure rufous, partially black to wholly black, with a large opaque black area on the flanks posteriorly; vestiture sparse and very short; clypeus transverse, very feebly sinuate; prothorax large, much wider than long, strongly, loosely punctate, subimpunctate latero-basally as a rule; elytra only a fourth wider than the prothorax, moderately inflated subbasally, the second and fourth depressed intervals finely, closely punctate, elsewhere more strongly, sparsely punctate; pygidium nearly bald, the hairs very short and sparse, denser near the apex, the sides rather broadly white; legs moderate, black. Length (♂ ♀) 10.0–12.0 mm.; width 5.4–6.7 mm. Florida (Jacksonville).

The description is taken from the female; the male has the thoracic punctures finer and more close-set and the pygidium more convex.

Trichius viridulus ssp. **semiviridis** nov.—Moderately narrow, shining, black, with strong green metallic lustre anteriorly, the elytra rufotestaceous, with feebler green reflection, the pygidium metallic green; clypeus parallel, nearly as long as wide, distinctly sinuate; prothorax parallel, abruptly oblique at the sides in apical third; surface strongly, not densely punctate; elytra two-fifths wider than the prothorax, moderately inflated subbasally; surface almost uniformly, rather sparsely though strongly punctate, the fourth interval more closely basally; flanks polished throughout, with an anterior short, and posterior long, transverse white line; pygidium convex, with short and very sparse hair, the lateral white area prolonged inward at base as a rule; legs rather short, with green metallic lustre. Length (♂ ♀) 10.0–11.0 mm.; width 5.0–5.7 mm. Florida (Marion Co.).

Allied to *viridulus* but less stout and differing in the more parallel, anteriorly obliquely narrowed prothorax, rufescent elytra, much less densely punctate on the flanks and with more developed transverse white lines. One example, apparently not differing otherwise, has the metallic green replaced by bluish-black throughout.

Trichius carolinensis n. sp.—Smaller, shining, uniform blackish-blue throughout, the legs greenish-black; pubescence short, sparse and inconspicuous; clypeus notably shorter than wide, distinctly sinuate; prothorax short, much wider than long, the sides subparallel and arcuate, more converging in apical third; surface strongly but rather sparsely punctate, the erect hairs fine; elytra not quite as long as wide, two-fifths wider than the prothorax, the sides arcuate, gradually converging posteriorly; surface almost uniformly, rather finely punctate, the fourth interval more closely but not depressed, the flanks subrugose, shining, with two very small and short transverse white spots; pygidium convex, sparsely sculptured and with very short sparse inconspicuous hairs, the usual lateral white areas well developed; hind tarsi (♂) not quite twice as long as the tibiæ. Length (♂) 9.0 mm.; width 4.5 mm. North Carolina (Southern Pines),—Manee.

Also a member of the *viridulus* series but much smaller and less inflated, differing greatly, also, in coloration and in the less elongate clypeus and prothorax. This form would certainly appear to be specific in value rather than subspecific.

TENEBRIONIDÆ

The following *Blapstinus* has been undescribed in my cabinet for some years, no available opportunity having occurred to define it until now:

Blapstinus pinorum n. sp.—Black and shining, the legs and antennæ black; head transversely rounded, three-fifths as wide as the prothorax, finely, closely punctate; antennæ slender, gradually broadened apically, shorter than the head and prothorax, the latter transverse, feebly sinuato-truncate at apex, with broadly rounded sides, finely, deeply and closely punctate, more closely and strongly toward the sides; elytra short, convex, not one-half longer than wide, rounding behind in apical two-fifths, shining, finely striate, the striæ closely punctate, finely suturad, more strongly laterad, the intervals feebly convex, confusedly punctate throughout, the punctures half the size of those of the striæ; legs slender, the hind tarsi short. Length 4.0 mm.; width 1.75 mm. North Carolina (Southern Pines),—Manee.

Smaller, more convex and more abbreviated than *mæstus*, with smaller and thinner antennæ, much less sinuate apex of the prothorax and coarser interstitial punctures of the elytra.

Aconobius densus n. sp.—Very narrowly elongate-oval and strongly convex, densely opaque, black, the legs blackish-piceous; vestiture close, short and coarse, grayish-fulvous; head fully four-fifths as wide as the prothorax, finely, densely punctate and gray-pubescent, wider than long, the antennæ long and heavy, extending well onto the elytra, black, the three outer joints slightly enlarged, the last narrower than the tenth, the third nearly as long as the next two; prothorax but little wider than long, the sides parallel, broadly and evenly arcuate, the apex and base subequally and evenly, feebly arcuate from side to side, the apical angles slightly obtuse but sharply marked; surface extremely densely punctate throughout, the short fringe along each side composed of close-set erect coarse hairs; scutellum small, triangular; elytra elongate-oval, three-fourths longer than wide, at the middle a third wider than the prothorax, coarsely, feebly striate, the striæ coarsely and closely punctate, the intervals with minute sparse confused punctures, the vestiture short and stiff; legs moderately long. Length 4.5 mm.; width 1.5 mm. New Mexico (Deming),—Wickham.

Differs greatly from *laciniatus* Csy., in its very narrowly oval form, more convex surface, less inflated antennæ, more oval and convex elytra and blackish legs.

Aconobius nigripes n. sp.—Form much broader and less convex than the preceding, black throughout the body, legs and antennæ; pubescence very short, stiff, abundant, obscure grayish in color; head only two-thirds as wide as the prothorax, strongly, very densely punctured; antennæ thick, heavy, the last three joints dilated decreasingly to the tip, the third not as long as the next two, the fourth longer than the fifth; prothorax a third wider than long, parallel and evenly, feebly arcuate at the sides, the apex barely narrower than the base, both evenly and feebly arcuate from side to side; surface strongly, very densely punctate, the punctures separated by very fine shining intervals, the lateral fringe as usual; elytra oblong, two-thirds longer than wide, arcuately narrowing in apical two-fifths, the sides feebly arcuate, only slightly wider than the prothorax; striæ rather coarse, somewhat coarsely but not very closely punctate, the intervals minutely, sparsely punctulate. Length 4.8 mm.; width 1.9 mm. Texas (Marfa),—Wickham.

Easily distinguishable from *laciniatus* by the less transverse prothorax, with the apex broadly arcuate and not truncate and by the much less impressed elytral striæ.

The genus *Aconobius* Csy., (Ann. N. Y. Acad. VIII, p. 617) is one of the *Blapstinus* group of Tenebrionidæ.

ADDENDUM

The name *Exoma*, proposed by me for a singular genus of Byrrhids (Can. Ent. 1908, p. 282), proves to be preoccupied by Melichar (1902), as shown by the recent list of Waterhouse and Sharp. In case no other name has been suggested in recent literature to replace it, I would propose the name **Exomella**, in which case the tribal name would assume the form EXOMELLINI.

It is rather remarkable that the genus *Tyloderma* Say, does not appear in any of the published general lists of generic names. I referred to this omission some years ago in the Canadian Entomologist.

INDEX

All generic and specific names without designation of authorship in the following index, refer to new descriptions in the preceding pages of this work. Names merely incidentally mentioned are frequently omitted.

PAGE

Acinopus Dej. 64, 65
Aconobius Csy. 378
densus. 377
nigripes. 378
ACUPALPINI. 48, 218
Acupalpus Dej. 221, 266
axillaris Mann. 229
carus Lec. 268
conflagratus Mann. 229
debilipes Say. 247
difficilis Dej. 255
elongatus Dej. 246
expertus. 267
humilis Dej. 288
hydropicus Lec. 267, 269
indistinctus Dej. 287
longiusculus Mann 229
longulus Dej. 263
lugubris Hald. 279
misellus Dej. 281
nanellus. 268
nitidus Dej. 232
obsoletus Say 233
pallipes Say 295
pauperculus Dej. 288
rectangulus Chd. 264
rotundicollis Hald. 281
suturalis Lec. 241
symmetricus Mots. 254
tantillus Dej. 255
testaceus Dej. 287
trivialis. 268
Adrimus olivaceus Bates. 34
panamensis. 33
Æpus testaceus Lec. 262
Agaosoma Mén. 168
Agonidus. 221, 225, 227
cephalotes 226
Agonoderus Dej. 222, 289
binotatus. 291
comma Fabr. 295
gracilitarsis. 296
idoneus. 292
infuscatus Dej. 292
latipennis. 298
lecontei Chd. 293
lineola Fabr. 291, 356
maculatus Lec. 291
micros Lec. 287
obliquus. 297

PAGE

Agonoderus culatus. 295
pallescens. 297
pallipes Fabr. 293
plagiatus. 294
quadricollis. 296
rectus. 297
rugicollis Lec. 298
suturalis Lec. 292
tarsalis. 294
vacans. 294
vividus. 294
Agonoleptus. 222, 284
parviceps. 285
Amara grossa Say. 57
Amblystomus Er. 227
Amerinus Csy. 221, 258
fuscicornis. 260
linearis Lec. 260
longipennis. 259
Amphasia Newm. 171, 194
interstitialis Say. 195
Anadaptus. 171, 203
baltimorensis Say. 205
chalceus Lec. 206
discoideus Dej. 205
nivalis Horn. 204
parvulus. 204
pitychrous Lec. 205
porosus Mots. 206
sanctæcrucis Fabr. 205
Aneflomorpha imbellis. 363
linearis Lec. 363
Anisocnemus Chd. 165
ANISODACTYLINI. 48, 170
Anisodactylus Dej. 170, 180
agricola Say. 184
alternans Lec. 206
amaroides Lec. 191
angustus. 188
arizonæ Csy. 208
baltimorensis Say. 205
californicus Lec. 189
chalceus Lec. 206
cœnus Say. 191, 357
confusus Lec. 189
consobrinus Lec. 187
discoideus Dej. 205
dulcicollis Laf. 178
furvus Lec. 182
haplomus Chd. 174

Anisodactylus harrisi Lec. 182
humeralis 190
incertus 186
incisus 185
interpunctatus Kirby 184
lætus Dej. 192
laticollis Kirby 183
lecontei G. & H. 206
lecontei Chd. 184
lodingi Schf. 182, 193
luctuosus Dej. 173
melanopus Hald. 183
merula Germ. 175
nigerrimus Dej. 183
nigrita Dej. 184
nivalis Horn 204
obscurus Lec. 191
obsolescens 188
opaculus Lec. 179
oregonus 189, 357
paganicus 190
paradoxus Hald. 184
pitychrous Lec. 205
porosus Mots. 206
puncticollis Chd. 192
punctulatus Kirby 183
rudis Lec. 206
sayi Blatch. 210
semipunctatus Lec. 186, 192
sericatus 187
similis Lec. 192
sinuatus 190
solidus 186
striatus Lec. 184
subæneus Lec. 191
sublævis Mots. 206
texanus Schf. 179
tristis Dej. 174
viridescens Lec. 206
Anisotarsus Chd. 171, 209
agilis Dej. 211
brevicollis Chd. 209
calathoides 212
cephalus 215
convexulus 210
delicatus 214
extraneus 212
flebilis Lec. 216
floridanus 214
inaudax 211
lamprotus Bates 208
maculicornis Chd. 215
nitidipennis Lec. 216
piceus Lec. 210
purpurascens Bates 211
subvirens 213
tenuitarsis 215
terminatus Say 213
testaceus Hald. 212
Anomoglossus Chd. 39
amœnus Dej. 40
delectans 39
Anomoglossus emarginatus Say 40
gravis 40
nanulus 41
pusillus Say 41
Anoplium laterale 365
mœstum Lec. 365
pinorum 365
Anthracus Mots. 221, 265
consputus Duft. 265
tener Lec. 265
Apatides pollens 359
puncticeps Csy. 360
Aplocentrus Lec. 170, 180, 181
Archodontes Lam. 356
Athrostictus Bates 135
Badister testaceus Lec. 262
Blapstinus pinorum 377
BOSTRYCHIDÆ 359
Brachylobus caurinus Horn 42
indigaceus 41
lithophilus Say 41
Bradycellus Er. 220, 223
collaris Payk. 223
congener Lec. 247
cordicollis Lec. 243
linearis Lec. 260
lucidus Csy. 234
neglectus Lec. 256
nigriceps Lec. 257, 288, 289
nitens Lec. 229
nitidus Dej. 232
nubifer Lec. 249
parallelus Chd. 247
rivalis Lec. 249
rupestris Say 246
subcordatus Chd. 258
Bradycidus 220, 222, 227
veneris 223
Brennus Mots. 26
basalis Csy. 28
compositus Csy 27
congener 28
dissolutus Schm. 27, 28
duplicatus Csy. 28
fuchsianus Riv. 26, 28
gentilis Csy. 28
hoppingi Roe. 30
humeralis 30
incipiens Csy. 29
insularis Csy. 27
integer 29
lativentris Mots. 30
obliquus Lec. 28
opacicollis Csy. 27
oreophilus Riv. 27, 30
ovalis Mots. 28
porcatus Csy. 27
productus 27, 29
rugiceps Horn 28, 29
striatopunctatus Chd. 28
striatus Lec. 26
symmetricus Csy. 26

Brennus ventricosus Dej. 26, 28
BUPRESTIDÆ 360
Buprestis consularis L.-G. 355
deficiens Csy. 355
fulgens Csy. 355
incolumis Csy. 355
inconstans Mels. 355
oregona Csy. 355
punctiventris Csy. 355
virens Csy. 355
flavopicta Csy. 355
Calosoma Weber 31
clemens. 32
davidsoni 33
ingens Csy. 32
lugubris Lec. 32
parvicollis Fall 32
peregrinator Guér. 32
prominens Lec 31, 32
semilævis Lec. 33
subgracilis Csy. 33
CARABIDÆ 25
CARABINÆ 25
CARABINI 31
Carabus comma Fabr. 295
furcatus Fabr. 291
lineola Fabr. 291
palliatus Fabr. 134
pallipes Fabr. 293
Catharellus 220, 227, 242
cordicollis Lec. 243
Celiamorphus 134, 141
adjunctus 144
contractus 144
currens. 143
ellipticus Dej. 143
fossulatus Dej. 142
opaculus 143
ovalis Dej. 142
CERAMBYCIDÆ 363
Ceruchus virginiensis 372
Chalcophora antennalis 360
brevicollis Csy. 355
cupreola. 360
ingens. 360
iridescens Csy. 355
lacustris Lec. 355
montana Csy. 355
obliterata Csy. 355
prominens Csy. 355
Chalcophorella Kerrem. 355
. obsolescens. 361
CHLÆNIINÆ 34
Chlænius apacheanus. 34
brevilabris Lec. 37, 38
chrysopleurus Chd. 38
cordicollis Kirby 35, 36
cumatilis Lec. 37
elegantulus Dej. 41
feisthameli Laf. 41
forreri Bates. 38
gilensis. 35
Chlænius insperatus Horn 38
leucoscelis Chev. 35, 36
monachus Lec. 36
perviridis Lec. 35
pimalicus. 38
regularis Lec. 34
sanantonialis. 36
sericeus Forst. 34, 35
sierricola. 36
sparsellus. 37
texanellus. 37
tomentosus Say 38
uteanus. 35
zunianus. 38
Cicindela Linn. 17
albertina Csy. 21
amnicola Csy. 24
ancocisconensis Harr. 23
apicalis W. H. 23
beckeri W. H. 24
calgaryana Csy. 18
canadensis Csy. 17
cinctipennis Lec. 19
collusor Csy. 24
conquisita. 357
cumatilis Lec. 24
denverensis Csy. . . . 20, 21, 357, 358
dowiana. 23
fascinans. 23
feminalis Csy. 18
globicollis Csy. 23
hentzi Dej. 24
lassenica. 22
lunalonga Shpp. 19, 20
mirabilis. 358
moapana. 22
montana Lec. 17, 18
nebraskana Csy. 18
nigrocœrulea Lec. 18
oreada. 358
oslari Leng. 357
ostenta Csy. 357
parallelonota 21, 358
pugetana. 20, 358
pusilla Say. 19
robusta Leng. 18
sayanella. 19
sierra Leng. 21, 358
spissitarsis Csy. 17
tularensis. 19
tuolumnæ Leng. 20
wichitana. 21
Cinyra L.-G. 361
abbreviata. 362
gracilipes Mels. 363
macilenta Csy. 362
ocularis. 362
Cratacanthus Dej. 50, 53, 57, 60
americanus Dej. 58
bisectus Csy. 58, 59
cephalotes. 59
dubius Beauv. 58

Cratacanthus litoreus Csy. 58, 59
subovalis 59
texanus Csy. 59
Cratocara Lec. 48, 300
brunnea 302
capitata Chd. 301
mentalis 302
CRATOCARINI 48, 299
Cratognathus Dej. 50, 57
alternatus Lec. 54
cordatus Lec. 62, 66, 67
Cryptophagus cribricollis Csy. 355
inscitus Csy. 355
CYCHRINI 25
Cymindis atrolucens Csy. 356
DAPTINI 47, 49
Daptus Fisch. 49, 52
Diachromus Er. 172
Dicerca abrupta Csy. 355
hesperica Csy. 355
inflatula Csy. 355
Dicheirotrichus Duv . . . 47, 172, 219, 222
Dicheirus Mann. 171, 196
alutaceus 200
angulatus 199
augustulus 200
australinus 201
brevisetosus 198
brunneus Dej. 202
decoloratus 201
dilatatus Dej. 198
hirsutus Mén. 198
immanis Horn 202
insularis 201
irregularis Mots. 200
obtusus Lec. 198
pallidus Mots. 201, 298
parallelus Lec. 200
pilosus Horn 199
piceus Mén. 200
rupimontis 200
strenuus Horn 197
villosus Mots. 200
Dinacoma Csy. 306
Discoderus Lec. 135, 157
æqualis 161
amœnus Lec. 158
congruens 162
cordicollis Horn 154
crassicollis Horn 159
hesperus 163
impotens Lec. 158
longicollis 162
obsidianus 158
parallelus Hald. 163
piceus 159, 164
pinguis Csy. 160, 164
robustus Horn 159, 164
subviolaceus 160
symbolicus 161
Dysphaga Lec. 371
Episcopellus 220, 235
Episcopellus autumnalis Say 236
nitescens 236
Euryderus zabroides Lec. 56
Eurytrichus Lec. 209
flebilis Lec. 216
Exoma Csy. 378
Exomella 378
EXOMELLINI 378
Feronia atrimedia Say 240
autumnalis Say 235, 236
interstitialis Say 195
ochropeza Say 272
pallipes Say 295
Geobænus congener Lec. 247
cordicollis Lec. 243
lugubris Lec. 239
neglectus Lec. 256
quadricollis Lec. 238
Geopinus Lec. 49, 50, 52
fluviaticus 52, 356
incrassatus Dej. 52
Glanodes 50, 60, 153
corpulentus 62
obliquus Horn 61, 62
puncticeps 61
regressus 62, 67
Glycerius Csy. 220, 231
intermedius Fall. 233
nitidus Dej. 232
obsoletus Say 233
obtusus Fall. 233
politus Fall. 233
Goes pulverulentus Hald. 368
robinsoni 368
tessellatus Hald. 368
Goniocellus 221, 224
bifossifrons 224
isthmianus 225
Goniolophus 221, 262
flavilimbus Lec. 263
longulus Dej. 263, 264
lucens 264
rectangulus Chd. 264, 269
Gynandromorphus Dej. 171
Gynandropus Dej. 135, 155
americanus Dej. 156
elongatus Lec. 157
hylacis Say 156
Gynandrotarsus Laf. 170, 172, 173
harpaloides Laf. 180
Hammoderus amplipennis Csy. 368
Hapalosalia densicollis 366
ruficollis Say 367
sphæricollis Say 366
HARPALINÆ 45
HARPALINI 48, 62
Harpalomerus 76
Harpalophonus Gangl. 69, 74
Harpalus Latr. 64, 69
abstrusus 87
acomanus 73
actiosus 79

Harpalus advena Lec. 95
ænescens Csy. 75
æquabilis 100
æsopus 117
agilis Dej. 211
albionicus Mann. 122
alienus Lec. 88
alternans Mots. 206
amputatus Say 70, 76
anthracinus Dej. 177
assimilis Dej. 75
aterrimus 104
atripes 95
autumnalis Say 131, 236
badius Dej. 84
basilaris Kirby 128
bicolor Fabr. 86
brunneus Dej. 202
caliginosus Fabr. 70, 71
canonicus Csy. 75
carbonarius Dej. 271
carbonarius Say 173
carbonatus Lec. 113
carolinæ Schf. 129
caudalis 73
cautus Dej. 95
celox 107
clandestinus Lec. 127
clientus 120
collucens 73
coloradensis 111
comis Hald. 130
compar Lec. 81
convictor Csy. 75
convivus Lec. 86
cordatus Lec. 67
crenatellus 94
curtatus Mann. 130
curticornis 124
deludens 80
depressicollis Mots. 130
desertus Lec. 124, 128, 356
dichrous Dej. 131, 132
dolosus 84
egregius 88
effetus 81
ellipsis Lec. 111
erraticus Say 70, 72
erythropus Dej. 80
fallax Lec. 102
faunus Say 84
femoratus Dej. 196
fenisex 81
foveicollis Lec. 99
fraternus Lec. 70, 115, 118
fugitans 98, 114
fulvilabris Mann. 122
funestus Lec. 116, 128
furtivus Lec. 119, 356
futilis 97
gemmeus 108, 114
gravis Lec. 125
Harpalus haldemani 79
herbivagus Say 102, 356
hylacis Say 156
illectus 121
impiger Lec. 74
impotens Lec. 158
innocuus Lec. 103, 114
intactus 97
iripennis Say 140
iripennis Schf. 133
lacustris 111
læsus Lec. 146
lascivus 100
latebricola 109
laticeps Lec. 91
lecontei 117
lewisi Lec. 116
liobasis Chd. 82
lividulus 101, 356
longicollis Lec. 83
longior Kirby 83
lucidus Lec. 123
lustralis Csy. 75
lustrans Csy. 123, 356
macilentus 96
maculicornis Chd. 215
malacus 121
manhattanis Csy. 194
mansuetus 104
megacephalus Lec. 92
mexicanus Dej. 208
mobilis 112
montanus Lec. 91
mormonicus 86
mutabilis Hald. 102
nactus 82
nigrinus Dej. 237, 238
nitidulus Chd. 109
nugax 122
obesulus Lec. 128
obliquus Horn 60, 61, 62, 67
oblitus Lec. 117
oblongus 126
obscuripennis Dej. 195
ochropus Kirby 128
oodioides Chd. 131
opacipennis Hald. 113
opacus Csy. 183
opicus 106
oppositus 125
oregonensis 94
papagonalis 77
patronus 89
paululus 110
pellax 105
pennsylvanicus DeG. 70, 77, 86
peritus 107
persolus 96
perspicuus 101
pimalicus 87
placidus Csy. 103
plenalis 108

Harpalus pleuriticus Kirby.....78, 97
probatus..... 119
protractus..... 85
providens..... 90
proximus Lec..... 102
pubitarsis..... 82
pumilio..... 100
recensus..... 99
recisus.....93, 114
rectangulus..... 74
renoicus.....127, 356
retractus Lec..... 74
rufimanus Lec..... 92
rufopiceus..... 80
rusticus Say..... 174
seclusus..... 106
sejunctus..... 126
socors..... 124
solutus..... 90
somnulentus Dej..... 105
spadiceus Dej.....70, 128, 129
stigmosus Germ..... 146
stupidus Lec..... 127
testaceus Hald..... 212
testaceus Lec..... 68
texanus..... 83
thoracinus..... 85
transversus..... 77
uteanus..... 118
vacivus..... 123
vagans Lec..... 78
varicornis Lec..... 128
ventralis Lec..... 113
vespertinus Csy..... 112
viduus Lec.....70, 88, 91, 114
viridiæneus Beauv....69, 70, 74, 75
viridis Say..... 75
vulpeculus Say.....131, 132
Hartonymus.....135, 165
hoodi..... 167
Hemisopalus.....134, 135
angulatus..... 139
concinnus Schf..... 138
delumbis..... 140
depressulus..... 137
dichromatus..... 139
discoderoides Schf..... 138
gagatinus Dej..... 138
iripennis Say..... 140
opalinus Lec..... 136
perpolitus Csy..... 136
subtinctus Lec..... 140
vigilans..... 137
Hexatrichus Tsch.....171, 172
Hypermallus breviusculus..... 364
compactus..... 364
externus Csy..... 363
militaris..... 364
Irichroa æneicollis Beut..... 25
tricarinata..... 25
Leptomus..... 1
LUCANIDÆ..... 372
Macronoxia Cr..... 322
Maronetus..... 30
imperfectus Horn..... 31
tenuis..... 31
Megapangus..... 71
Megomus..... 1
Melanotus capitatus Chd..... 301
erro Lec.....49, 301, 303
Micracinopus.....63, 64
politissimus..... 64
MICRATOPINÆ.....42, 356
Micratopus..... 42
fusciceps..... 43
Neopolyarthron Sem..... 356
Nothopus Lec.....50, 54
arizonicus..... 56
obtusus..... 56
privatus..... 56
valens.....55, 356
zabroides Lec..... 56
Notiobia leiroides Bates..... 218
parilis Bates..... 218
Notiophilus evanescens Csy..... 356
Oberea flavipes Hald..... 369
myops Hald..... 369
tibialis Hald..... 369
umbra..... 370
Omus Esch..... 1
ambiguus Shpp..... 2
audouini Rche.....2, 3
blaisdelli Csy..... 11
borealis Csy..... 10
brunnescens Csy..... 7
californicus Esch.....1, 4, 5
collaris Csy.....14, 16, 357
compositus Csy..... 15
confluens Csy..... 13
cribripennis Csy..... 11
cylindricus W. H..... 4
degener Csy..... 13
dejeani Rche..... 1
dunni Csy..... 9
edwardsi Cr.....6, 7
elongatus Csy..... 9
fraterculus Csy.....1, 13
fuchsi W. H..... 16
gracilior Csy..... 15
horni Lec.....14, 16
humeroplanatus W. H..... 3
intermedius Leng.....11, 16
lævis G. H. H.....14, 16
lecontei G. H. H.....8, 16
lobatus Csy.....7, 357
longitarsis..... 12
lucidicollis Csy.....7, 357
lugubris Csy..... 12
maritimus Csy..... 9
mimus Csy..... 6
montanus Csy..... 6
nunenmacheri W. H..... 10
opacellus..... 16
oregonensis Csy..... 5

Omus parvicollis Csy. 7, 8
parvulus Csy. 3, 4
procerus Csy. 8
pronotalis W. H. 4, 10
punctifrons Csy. 13
regularis Csy. 9
rugipennis. 3
sculptilis Csy. 5, 6
sequoiarum Cr. 11, 12
sierricola Csy. 12
solidulus. 3
spissipes Csy. 8
submetallicus G. H. H. 1
temperatus. 15
tularensis Csy. 15
vandykei W. H. 16
vermiculatus. 5, 6
xanti Lec. 16
Opadius. 63, 66
cordatus Lec. 67
Ophonus Steph. 64, 65
opacipennis Hald. 113
Osimus Mots. 64, 65
Pangus americanus Mots. 163, 164
caliginosus Fabr. 71
testaceus Lec. 68
Paramallus Csy. 356
PASSALIDÆ 374
Paxillus parvus Csy. 375
Pelmatellus Bates. 220, 234
lucidus Csy. 234
sinuosus. 235
stenolophoides Bates. 235
Pharalus. 63, 68
testaceus Lec. 68
Philodes Lec. 221, 260
alternans Lec. 262
testaceus Lec. 262
Pinacodera atrata Dej. 356
Piosoma Lec. 50, 53
alternata Lec. 54, 62
brevipennis. 54
setosa Lec. 54
Platycerus californicus Csy. 373
laticollis. 373
pedicellaris Mollen. 374
Plectralidus. 72
Plectrodes Horn. 307
palpalis Horn. 321
pubescens Horn. 307, 321
Pogonocherus emarginatus Csy. 356
Pogonodaptus Horn. . . 49, 300, 303, 305
impressiceps. 305
mexicanus Bates. 304
piceus Horn. 304
Polpochila Sol. 48, 49, 300
mexicana Bates. 304
Polyphylla Harr. 306, 322
acomana. 342
adusta. 331
arguta. 339
bisinuata. 327
Polyphylla castanea. 347
cavifrons Lec. 323, 353
comes. 352, 354
concurrens Csy. 343
conspersa Burm. 354
crinita Lec. 333, 353
decemlineata Say. 345, 353
diffracta Csy. 332
diffusa. 329
fuscula Fall. 332
gracilis Horn. 353
hammondi Lec. 325
impigra. 326
incolumis. 335
lævicauda. 338
laticauda. 345
latifrons. 340
matrona. 350, 353
modulata. 333
mystica. 334
nigra. 334
oblita. 326, 354
occidentalis Linn. 351, 354
opposita. 330
oregona. 348
pacifica Csy. 344, 353
parilis. 345
perversa. 348
petiti Guér. 341
pimalis. 330
potosiana. 349, 353
proba. 329
reducta. 346
relicta. 336
robustula. 336
ruficollis. 346
rugosipennis. 337
sejuncta. 328
sobrina. 339
speciosa Csy. 342
squamicauda. 324
squamotecta. 343, 353
subvittata Lec. 327, 353
variolosa Hentz. 351
verecunda. 325
Proculus beckeri Zang. 375
densipennis. 374
magister Csy. 374
mandibularis. 374
Psenocerus funebris. 367
tristis Csy. 367
Pseudamphasia. 171, 195
sericea Harr. 196
Pseudomorpha Kirby. 46
Pseudonomaretus Roe. 30
Pteropalus. 64, 131
dichrous Dej. 132, 133
fluvialis. 133
iripennis Schf. 133
vulpeculus Say. 132
PTEROSTICHINÆ. 33
Pterostichus pumilus Csy. 356

Raphalus....64, 65
convergens.... 65
Riponus Csy.... 356
Salebius lictor Csy.... 355
montanus Csy.... 355
SCARABÆIDÆ.... 375
Scybalicus Schm.... 171
Selenalius....135, 153
cordicollis Horn.... 154
parilis.... 155
SELENOPHORINI....48, 134
Selenophorus Dej....134, 135, 144
æneopiceus Csy....151, 153
æreus Lec.... 149
beauvoisi Dej.... 153
concinnus Schf.... 138
cupreolus.... 149
discoderoides Schf.... 138
ellipticus Dej.... 143
famulus....146, 356
fatuus Lec.... 152
fossulatus Dej.... 142
gagatinus Dej.... 138
granarius Dej.... 143
houstoni....151, 356
implicans....151, 356
impressus Dej.... 134
læsus Lec.... 146
lugubris Dej.... 194
maritimus....148, 153
maurus Hald.... 138
mustus.... 152
opalinus Lec....134, 136
otiosus.... 148
ovalis Dej.... 142
palliatus Fabr.... 146
parallelus Hald.... 163
pedicularius Dej.... 149
perpolitus Csy.... 136
planipennis Lec....147, 153
puellus Putz.... 149
pulicarius Dej.... 143
pyritosus Dej.... 145
riparius....150, 153
scolopaceus.... 150
subtinctus Lec.... 140
troglodytes Dej.... 149
varicolor Lec.... 140
viridescens Lec.... 138
Spectralia Csy.... 361
Sphæroderus diffractus.... 25
lecontei Dej.... 25
Spongopus Lec....172, 217
verticalis Lec.... 218
Stenocellus....221, 243
alutaceus.... 250
antennalis.... 245
ardelio.... 254
aridus.... 248
californicus Lec.... 254
cinctus Say.... 247
congener Lec....247, 357
Stenocellus debilipes Say.... 247
decorus.... 248
discipulus.... 252
exstans.... 253
festinans.... 257
insulsus.... 246
larvatus....256, 257
lineatus.... 253
lustrellus.... 251
montanus.... 251
neglectus Lec....256, 257
nubicollis.... 253
nubifer Lec.... 249
occultus.... 246
picipes.... 255
provoensis.... 256
punctcollis.... 251
purgatus.... 249
rivalis Lec.... 249
rupestris Say.... 246
sejunctus.... 252
socors.... 250
suavis.... 257
supplex.... 245
symmetricus Mots....254, 257
tantillus Dej....255, 257
Stenolophus Dej....221, 269
abstinens.... 273
anceps Lec.... 277
badiipennis Hald.... 239
californicus Lec.... 254
captiosus....281, 356
carbonarius Dej.... 271
carus Lec.... 268
cincticollis Lec....278, 283
cinctus Say.... 247
conjunctus Say.... 281
consors.... 276
convexicollis Lec.... 272
debiliceps.... 276
dissimilis Dej.... 278
dolosus.... 280
fidelis.... 275
flavilimbus Lec.... 263
flavipes Lec.... 274
fuliginosus Dej.... 273
fuscatus Dej....280, 283
fuscipennis Lec.... 273
gracilis Csy....272, 283
humidus Ham.... 280
hydropicus Lec.... 267
incitatus.... 283
incultus.... 275
indistinctus Mots.... 277
limbalis Lec.... 277
longitarsis.... 277
moquinus.... 282
ochropezus Say.... 272
peregrinus.... 278
plebejus Dej.... 279
remissus.... 274
rotundatus Lec.... 282

Stenolophus rotundicollis Mots. 277
scitulus Csy. 283
semitinctus 279, 356
spretus Dej. 271
tener Lec. 265
thoracicus 282
unicolor Dej. 280
versicolor Kirby 273
STENOMORPHINI 48, 167
Stenomorphus Dej. 167
batesi 168
californicus Mén. 169
rufipes Lec. 168
scolopax 169, 356
Stilbolidus 171, 206
arizonæ Csy. 208
aztecanus 208
mexicanus Dej. 208
Strangalia maneei 367
Tachistodes 222, 286, 289
fusciceps 288
humilis Dej. 288
indistinctus Dej. 287
partiarius Say 288
pauperculus Dej. 288
testaceus Dej. 287
Tachycellus Moraw. 220, 227, 237
conformis Fall 241
kirbyi Horn 240
nigrinus Dej. 238
turbatus Fall 234
TENEBRIONIDÆ 377
Tessaropa Hald. 371
apicalis 371
tenuipes Hald. 371
ventralis Hald. 372
Tetraopes sandix 370
Texania Csy. 355
Thyce Lec. 306, 307
angusticollis 320, 321
angustula 315
aperta 315
blaisdelli Csy. 313
brevitarsis 314
carpenteri Lec. 309
crinicollis 310, 320
fieldi Fall 319
fossiger Csy. 314
harfordi Csy. 318
longipalpis 317
nanella 318
nitidula 313
ochreata 314
palpalis Horn 321
pistoria Csy. 311, 320
pulverea Csy. 316
riversi Csy. 309
rotundicaudata 311
Thyce simplicipes 319
squamicollis Lec. 308, 320
squamosa Csy. 318
vestita 312
Trechus conjunctus Say 281
flavipes Kirby 246
immunis Kirby 268
partiarius Say 288
ruficrus Kirby 229
rupestris Say 246
similis Kirby 240
tibialis Kirby 238
Trichius carolinensis 376
obesulus 376
rufobrunneus 375
semiviridis 376
viridulus Fabr. 376
Trichocellus Gangl. 220, 227
boreellus 229
cognatus Gyll. 227
lateralis 230
monticola 230
nitens Lec. 229
placidus Gyll. 227, 228
punctipennis 230
ruficrus Kirby 229
Trichopselaphus Chd. 164
Triliarthrus 220, 238
atrimedius Say 240
badiipennis Hald. 239
conformis Fall 241
kirbyi Horn 240
properus 240
protractus 239
tetricus 241
Triplectrus Lec. 170, 172, 181
æthiops 175
anthracinus Dej. 177
carbonarius Say 173, 180
convexus 176
crassus Lec. 174
dulcicollis Laf. 178
ellipticus Lec. 178
gravidus Lec. 174
haplomus Chd. 174
harpaloides Laf. 180
merula Germ. 175
modicus 178
opaculus Lec. 179
ovularis 177
peropacus 176
pinguis Lec. 174
rufipennis Lec. 173
rusticus Say 174, 180
texanus Schf. 179
Tyloderma Say 377
Xestonotus Lec. 171, 193
lugubris Dej. 194

Issued November 28, 1914

5